An Address

ON

THE PRACTICE OF MEDICINE AS A FINE ART.

DELIVERED BEFORE THE MANCHESTER MEDICAL SOCIETY,

BY

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ABOUT fifty years ago Buckle wrote that wonderful book, *The History of Civilization in England*, and in studying the methods of Cullen, the great Scottish physician, he says:

> Even now and notwithstanding the great steps which have been taken in morbid anatomy, in animal chemistry, and in the microscopic investigation both of the fluids and solids of the human frame, the treatment of disease is a question of art, far more than a question of science. What chiefly characterizes the most eminent physicians, and gives them their real superiority, is not so much the extent of their theoretical knowledge—though that, too, is often considerable—but it is that fine and delicate perception which they owe partly to experience and partly to a natural quickness in detecting analogies and differences which escape ordinary observers. The process which they follow is one of rapid and, in some degree, unconscious induction. And this is the reason why the greatest physiologists and chemists which the medical profession possesses are not, as a matter of course, the best curers of disease. If medicine were a science they would always be the best. But medicine, being still essentially an art, depends mainly upon qualities which each practitioner has to acquire for himself, and which no scientific theory can teach. The time for a general theory has not come, and probably many generations will have to elapse before it does come. To suppose, therefore, that a theory of disease should, as a matter of education, precede the treatment of disease is not only practically dangerous but logically false.

Now the first essential in an argument is to define one's terms. And for a definition of science I again turn to Buckle. In considering the study of moral philosophy he points out that it is not a science, because if studied by induction we arrive at one conclusion; if we proceed by deduction, we arrive at another:

> This difference in the results is always a proof that the subject in which the difference exists is not yet capable of scientific treatment, and that some preliminary difficulties have to be removed before it can pass from the empirical stage into the scientific one. As soon as these difficulties are got rid of the results obtained by induction will correspond with those obtained by deduction; supposing, of course, that both lines of argument are fairly managed. In such case it will be of no importance whether we reason from particulars to generals, or from generals to particulars. Either plan will yield the same consequences, and this agreement between the consequences proves that our investigation is, properly speaking, scientific. Thus, for instance, in chemistry, if by reasoning deductively from general principles we could always predict what would happen when we united two or more elements, even supposing those elements were new to us; and if by reasoning inductively from each element we could arrive at the same conclusion, one process would corroborate the other, and by their mutual verification the science would be complete. In chemistry we cannot do this; therefore chemistry is not yet a science, although, since the introduction into it, by Dalton, of the ideas of weight and number, there is every prospect of its becoming one. On the other hand, astronomy is a science, because by employing the deductive weapon of mathematics, we can compute the motions and perturbations of bodies; and, by employing the induction weapon of observation, the telescope reveals to us the accuracy of our previous and, as it were, foregone inferences. The fact agrees with the idea; the particular event confirms the general principle; the principle explains the event; and their unanimity authorizes us to believe that we must be right, since, proceed as we may, the conclusion is the same; and the inductive plan of striking averages harmonizes with the deductive plan of reasoning from ideas.

For my definition of art I turn to Ruskin. In a lecture on the unity of art, delivered at Manchester and incorporated in his book entitled *The Two Paths*, he says:

> It would be well if all students would keep clearly in their mind the real distinction between these words which we use so often, "Manufacture," "Art," and "Fine Art." "Manufacture" is, according to the etymology and right use of the word, "the making of anything by hands," directly or indirectly, with or without the help of instruments or machines. Anything proceeding from the hand of man is manufacture; but it must have proceeded from his hand only, acting mechanically, and uninfluenced at the moment by direct intelligence.
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> Then, secondly, Art is the operation of the hand and the intelligence of man together; there is an art of making machinery; there is an art of building ships; an art of making carriages; and so on. All these, properly called Arts, but not Fine Arts, are pursuits in which the hand of man and his head go together, working at the same instant.
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> Then Fine Art is that in which the hand, the head, and the heart of man go together. . . . Thoroughly perfect art is that which proceeds from the heart, which involves all the noble emotions; associates with these the head, yet as inferior to the heart; and the hand, yet as inferior to the heart and head; and thus brings out the whole man.

Another definition which has been given is that "Fine arts are such as give scope not merely to manual dexterity, but to genius; as music, painting, sculpture, architecture, etc."

Now, I wish for the purpose of this address to take the liberty of translating Ruskin's word "hand" into the phrase, "All therapeutic means at the disposal of the physician or surgeon"; and these may vary from the giving of a drug to the giving of advice, from massage to the surgical skill required to remove a brain tumour. And I contend that the practice of medicine is a fine art proceeding from the heart, involving the noble emotions of faith, hope, and charity; it has associated with it the head, using all available methods of diagnosis; and the hand, including not only surgery, but all other available therapeutic measures.

Let us first examine shortly what an interval of fifty years—the time of my own life—has done to prove or to uphold Buckle's statement that medicine is essentially an art and not a science. Certainly in the case of chemistry, as Buckle surmised, science has triumphed, and every advance in chemical knowledge shows clearly how much nearer it becomes to the perfect science in which, reasoning by induction or by deduction, both lead to the same conclusion. Electricity and all other branches of Natural Philosophy in the same way are more and more approaching the level of true sciences. And if this is the case in the inorganic world, there seems to be hope that it may be so in the organic world, until we approach the most difficult problem of all—the nature of life itself; and hope also that one day the questions of disease and its treatment may become more and more scientific, although they may never be entirely so.

I will give some illustrations, drawn from the progress of the last fifty years, to show how this hope is becoming fulfilled. The germ theory of disease is a big general proposition that certain definite germs are the cause of certain definite diseases. Arguing deductively, we say that the growth of the tubercle bacillus in the body will cause fever, night sweats, wasting, and other symptoms depending on the organ attacked. Or, arguing inductively from particulars to general, we find irregular fever, cough, haemoptysis, wasting, night sweats, and certain physical signs in the lungs, and we say they are caused by the growth of the tubercle bacillus. Again, we put forward the general statement that absence of a functioning thyroid gland will cause the symptoms of myxoedema; and we expect deductively to find the slow mind and speech, the coarse and thickened skin, the falling of hair, and the waxy complexion, with malar flush. Or, finding a patient with these well-known signs, we say inductively that there is a functionless thyroid gland, and that the patient will be cured by the administration of thyroid extract by the mouth. Perhaps you will excuse a personal allusion. The discovery of the cause of the symptoms of the epidemic of arsenical poisoning some twelve years ago was first a piece of very rapid induction (for, as a matter of fact, induction of some simple kind always, consciously or unconsciously, precedes deduction). This was: Here are cases of herpes; I generalized and said, the only drug which causes herpes is arsenic; then by deduction I said these cases are arsenical poisoning. I then started the problem the other way round and took all particulars, the paralysis, the pigmentation of the skin, the herpes, etc., and, arguing inductively, arrived at the same conclusion that they were cases of arsenical poisoning. All these are examples of pure science as definite as are the problems of astronomy; and so I might go on giving a series, ever increasing in number, of other examples in all branches of medicine and surgery. And these achievements have been brought about by observation and experiment aided by the use of new methods and instruments of precision, utilizing to the

full the researches of the physicist, the chemist, and the biologist, without whom we can make no progress.

The pathologist works almost entirely on purely scientific lines, and so does the hygienist, who is to my mind doing the highest work of any department of medicine, fulfilling the old saying that prevention is better than cure. But when we are dealing with the diagnosis and treatment of actual living patients the question of pure science is worthy of some further consideration.

We proceed in our investigations by the methods of observation and experiment. Now, the physician is very strictly limited in the method of experiment, for he must never do anything which may be harmful or unnecessarily painful to his patient. Bacon, in his *Novum Organum*, has compared experiment with the torture of witnesses, but nothing even of a suggestion of torture is permissible in diagnosis or treatment. In observation we watch with attention phenomena as they occur; to experiment is not only to observe, but also to place the phenomena in particularly favourable circumstances as a preliminary to observation. Or, as Mill says, that in observation we *find* our instance in Nature; in experiment we *make* it by an artificial arrangement of circumstances. It is observation to examine a drop of blood to assist in making an accurate diagnosis in some form of anaemia; it is experiment if we first give our patient arsenic and afterwards examine a blood film to see the effect of the drug on the blood cells. It is observation to look at a fractured bone by means of the *x* rays; it is experiment to give a bismuth meal and watch by the fluorescent screen the behaviour of the bismuth in the alimentary canal.

To obtain our information about the condition of a patient we must, then, use every legitimate means, and, if necessary, intensify and add to the power of our special senses by the use of mechanical, physical, and chemical methods. Taste is not now, thanks to the use of Fehling's solution, any more used as a diagnostic method. Smell is aided when by chemical means we produce some diagnostic odour, say in the urine, previously hidden. Hearing is made more conveniently applicable by the use of the stethoscope; and although I have not much faith in various instruments on the market supposed to intensify sounds, yet I have often thought some proper microphonic method would be useful, and I should gladly welcome some form of instrument such as is known in physical laboratories by which certain sounds could be picked out to the exclusion of others. Touch is aided by probes, electrical and otherwise; by instruments of measurement, from tape measures to cyrtometers; by instruments for amplifying and recording movements, such as the sphygmograph and the polygraph, or for estimating blood pressure by the sphygmometer; and in the thermometer we can make accurate the extraordinary uncertainty of the hand in testing a temperature. It is, however, in aiding our vision that we have so many means at our disposal—the microscope, the spectroscope, the polariscope; the *x* rays, the electro-cardiograph, the galvanic and faradic batteries for testing the condition of the neurons and the muscles, and chemical analysis which enables us by visible reactions to judge of the presence of albumen, of sugar, or of free hydrochloric acid.

In the above rapid sketch of the uses of scientific methods in medicine I have not indicated more than a minute fraction of what I think medicine owes to science; moreover, I believe all future progress will be on scientific lines, and on scientific lines only. But this does not, to my mind, controvert the assertion that the practice of medicine is a fine art. And this is the parting of the ways in my argument.

The practice of medicine is, if you like, an art based on scientific methods. To use an analogy which is not perhaps perfect—there was much science underlying and as a preliminary to the painting of Raphael's Madonna, the science of geometry and perspective, of light, and of colours; there is much science underlying the production of a piece of music, but the four single notes of the opening bar of Beethoven's fifth symphony on which the whole work is largely based do not constitute the symphony itself.

I will first consider some of the imperfections and some of the fallacies of so-called scientific medicine. I do this with much misgiving lest it should be thought for a moment either that scientific methods should not be used or that I wish otherwise than to improve these methods. I do so also as a warning to those who most illogically are prepared to base their diagnoses on some one or two observations made by the later scientific methods and are content with diagnoses supplied by a clinical laboratory expert or made by an *x*-ray examination. Any such diagnosis must be entirely subservient to an examination of the patient himself made by the trained special senses of the physician. All this may sound like a platitude, but, unfortunately, I feel that the warning is seriously needed at the present time. The student of medicine, and sometimes his teacher, often forget that the old methods of examining a patient, conducted by the more or less unaided senses, including that very necessary sense, common sense, are just as much scientific methods as examination by the most elaborate chemical or physical methods. They certainly have to be learnt by long years of practice, and have to be done personally by the physician; and I am afraid that of late years I have noticed amongst students a certain tendency to indolence, because, not being able to conduct elaborate scientific methods themselves, they rely for their diagnoses on various reports from experts, and they seem to forget that when they enter into practice many of the elaborate scientific methods are out of their reach. A short time ago I asked a student how he would diagnose a pleuritic effusion. He promptly answered, "By the *x* rays." I then said, "And supposing you were practising in the Isle of Skye, how would you diagnose it?" He said, "I do not know."

It is not necessary to be in the Isle of Skye to be placed in a position where elaborate methods are unavailing, and, moreover, a point very often forgotten, elaborate methods take time and are very costly, and for this very reason are often practically impossible. Now, in this society, medical politics are tacitly forbidden, but under a certain scheme of medical service time will be short and money for special examinations non-existent.

One drawback to the scientific method is that the physician in his practice is dealing with one patient at a time. The hygienist can, as I have already said, work more scientifically, because he is dealing with masses of population, and can more easily check his results. But when one deals with a single person one must remember that no one person is like another, and therefore true scientific method is impossible; the coefficient of error is too enormous. I suppose no two chemical balances and no two measures are exactly the same; but their differences are so slight as to be negligible. But two sphygmograms from different patients can never be scientifically compared; nor even two from the different wrists of the same patient; and, indeed, hardly two taken at different times from the same wrist. The same thing applies to readings of the sphygmomanometer, and equally, of course, to merely feeling a pulse with the finger. And when it is remembered that man differs from man not only in structure but in inheritance and in life-history, it must be conceded that an investigation of his condition can never be a matter of pure science, but merely of science in which there is much surmise. It is owing largely to differences in structure, to imperfect instruments, and to want of experience that *x*-ray examinations may be so fallacious. We could not now do without them, but I could give several cases to show that opinions given and diagnoses resting only on this method have been most harmful in practice. Similarly, I have known most serious mistakes made when entire dependence has been placed on diagnoses made only by bacteriologists, either owing to pure errors or to imperfect methods, or to imagining on the part of the bacteriologist that his results were so scientific as to be incapable of fallacy.

Another fallacy attached to the scientific method is really the logical fallacy of "induction by simple enumeration," and one which I will call the percentage fallacy. If a certain phenomenon is present in 999 instances out of 1,000, one can fairly safely call the phenomenon almost a necessary part of the instance. But if we are dealing with a phenomenon occurring in, say, only 80 per cent. or 90 per cent. of certain instances, reliance on this frequency may, and often does, lead to diagnostic errors, and to errors in treatment. It is unscientific and a stifling of further investigation to say that without syphilis there would be no general paralysis of the insane, even if we can prove

that syphilis has been an antecedent in 90 per cent. of the cases. And because a symptom is present in, say, 80 per cent. of the cases of a certain disease, we must be careful not to exclude that disease because in the particular patient we are examining that symptom is not present. Rarely there is no tachycardia in Graves's disease; and although diarrhoea is only present in about 66 per cent. of cases of enteric fever I have seen the diagnosis excluded because of the absence of diarrhoea. Supposing for the sake of argument that by Cammidge's method the presence of cancer of the pancreas can be excluded in 75 per cent. of the cases tested, let us by all means use this information for what it is worth, but do not let it blind us to the fact that our particular patient may quite well be one of the 25 per cent. in which the reaction is of no account.

A further enormous drawback to the full use of the scientific method I have already alluded to, namely, the strict limitation of the method of experiment in practical medicine. And here I would like to enter a protest against totally uncalled-for methods of examination which may be painful to the patient. I have known of a case of far advanced general paralysis of the insane in which a well-known neurologist insisted on a lumbar puncture and an examination of the cerebro-spinal fluid before he would make his diagnosis.

Von Pirquet's reaction for diagnosing tuberculosis is to me worse than useless; it has so many fallacies that it cannot even be used as confirmatory evidence of phthisis. Once a strong medical man who had recently had an influenzal tracheitis, accompanied, as this often is, by slight haemoptysis, came to ask me where he had better go to live, as he was selling his practice immediately, because having obtained a positive von Pirquet's reaction he found he had phthisis. I told him what I thought of such a method of diagnosis, went into his recent history, his symptoms, and physical signs, gave him a more accurate diagnosis, sent him away for a short holiday, whence he returned to his work as well and strong as ever. Calmette's reaction is even worse, as it may be positively dangerous to the patient, and ought, I think, to be totally condemned as a diagnostic method.

Both in diagnosis and in treatment, one skilled clinician of long experience may be, and often is, much more accurate when not using elaborate scientific methods than is another who is using them. I have known hospital sisters of great experience, using no instrument but the unaided eye, diagnose accurately a malignant endocarditis, a typhus fever, and an acute miliary tuberculosis, when the physician in charge could not satisfy himself of the ailment. The scientific physician in treating a case of pneumonia may pin his faith down entirely to the use of a vaccine, and perhaps deprecate the use of other methods; the more artistic physician may use the vaccine but will most certainly not rely on it only, but on many other means, some of which may seem trifles to the scientist. This want of faith may be due to the present imperfections of the vaccine treatment, which may or may not disappear with the increase of knowledge, but the necessity of the existence of the artist will still remain. In the use of drugs, again, the artist will shine. Take the case of opium; there is an art in knowing when to give it and when to refrain; it is said to be dangerous in cases of bronchitis and in Bright's disease, yet it is just in these two conditions in which an artist can use it with such enormous benefit; and it requires an artist to say which of the numerous hypnotics to the exclusion of all others should be given to any particular patient suffering from insomnia. All this, if you will, is in the nature of intuition or of mere empiricism; that is so, but it is not without enormous advantages to the patient, and it emphasizes the absolute necessity of learning medicine by the bedside as well as in the lecture-room or the laboratory. Medicine must be learnt from the experienced clinician rather than from the skilled scientist, and if I had my way I would allow no one to practise medicine unless he had first resided for at least twelve months in a general hospital.

I will give a few further examples of art in medical practice, and I will first allude to the art of cross-examination, which can only be learnt by personal experience. This art, in which I include the art of the detective, is an absolute necessity in the investigation of disease, and it is because some men do not possess it that they are never a success in medical practice, and without it many blunders are made. I learnt such power as I possess in this direction from repeatedly, some years ago, listening to the cross-examinations of the late Mr. Sidney Smelt, the then coroner for the city of Manchester. It was an education to see him handling either an unwilling witness or an ignorant, stupid witness, or a too voluble witness; the patience he displayed, the way he sorted out the wheat from the chaff, the immediate use he made of a phrase dropped by accident, of the peculiar accentuation of a sentence or even a change of emotion shown by the voice or in the face: and having thus been put upon the track of some new truth, the way in which he followed it up until the truth was revealed was a pure delight to me. Of course, in cross-examination, knowledge of what you are looking for, or of what may be revealed, is necessary, and therefore it cannot be used to the full by the young student, who must learn, as I had to do, by watching the process used by those of greater experience. Scouting without knowledge is useless for obtaining information. If I were in a jungle, I might observe certain spoor, the footprints, the way vegetation was disturbed, the kind of animal droppings, but this would give me no information; it is only the trained shikari who can tell you that a tiger has passed that way.

Again, in the practice of medicine the art of the lawyer is frequently employed. The other day I was asked by one of the laymen on the infirmary board if in considering a certain question at the medical board the presence of a lawyer would be of any assistance to us. I declined the offer with thanks, telling him that we were giving legal advice to lawyers every day in the week. I cannot give instances, but you all know how in both diagnosis of cause of illness and also in the treatment it may be quite necessary that legal matters have to be gone into often with considerable detail.

And the doctor as priest; the man to whom confessions are made when they can be made to no one else, the man who has to blame, and often blame severely, the wrong-doer, and to give praise where praise is due, to encourage the patient in his efforts to reform, to sympathize properly (and what mischief the improper sympathy of the layman does is untold); and this sympathy must not only be for the sufferer in his bodily pain or his mental distress, but also for the relations and friends. And the physician must be able to make his patient believe in him, for without this faith his ministrations may be as nothing. And, finally, the power of instilling hope, even if there is but little left, for by this faith and hope many have reached the end with a feeling of pleasure, and known nothing of the agony of death.

But these things are not science; they are art, and they are fine art, for they require the hand, the head, and the heart.

A COMMON FORM OF HEART DISEASE (AURICULAR FIBRILLATION).

BY

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In the first place I desire to thank you for the honour you have conferred upon me in inviting me to read a paper before the Worcestershire and Herefordshire Branch of the Association.

Your invitation came to me when I happened to be reading the Schorstein lectures by Dr. James Mackenzie on auricular fibrillation,[1] and it occurred to me that this would be a good subject to bring before you, as I have been working at it for the past two or three years. Moreover, it is a subject of which every medical man must have some considerable knowledge and experience.

Auricular fibrillation is a clinical entity. We have all of us met it, although we may not have been aware of the fact. We are in the same position as Monsieur Jourdain in *Le Bourgeois Gentilhomme* when he discovered during his lessons in philosophy that he had been talking prose all his life without knowing it. Auricular fibrillation, for all practical purposes, is a paralysis of the auricles; yet it is not quite a paralysis, the auricles are in a state of

distension, and their power of performing a well co-ordinated act of contraction is entirely lost, yet the auricular walls are not stationary. On close scrutiny they appear to be alive with movement; rapid, minute, and constant twitchings are observed in a multitude of small areas upon their surfaces.

THE RECOGNITION OF AURICULAR FIBRILLATION.

Electro-cardiographic records give the most certain information. I only mention these to dismiss them, because the electro-cardiograph is a laboratory instrument and an extremely difficult one to manipulate.

A simpler method is by taking simultaneous records of the venous and arterial pulses by means of the Mackenzie ink polygraph, or with Mackenzie's modification of the Dudgeon sphygmograph.

Both these instruments I have used for the past two or three years; they require some practice and a little patience, but my house-physicians learn to make records for me in the course of a few weeks; their use, therefore, presents no great difficulty. Still neither of these instruments is an absolute necessity. Auricular fibrillation can be recognized by carefully feeling the pulse and listening to the heart sounds.

The pulse is characteristic. It is continually irregular, the *pulsus irregularis perpetuus*. The irregularity is of a disorderly kind; the strength of the beats and the pauses between the beats are continually changing in an irregular manner.

Rate.

The pulse is not always a true indication of the heart-rate, because frequently many beats are too feeble to be felt at the wrist. As a rule the pulse is rapid, and a curious feature is that the rate tends to be approximately double the normal rate (110–150). In many cases, however, the rate may be 70–80–90, and in patients under the influence of digitalis a rate of 40–50–60 is quite common.

Murmurs.

Auricular fibrillation occurs in cases of disease of the heart both with and without disease of the valves; that is to say, it is met with in valvular disease and in cases of myocardial degeneration (cardio-sclerosis or senile heart) apart from valvular disease. It is quite evident, therefore, that however common auricular fibrillation may be in connexion with valvular disease, the disease of the valve *per se* is of no importance as an etiological factor in the production of the fibrillation. Auricular fibrillation is due to myocardial degeneration and not to valvular disease. Nevertheless valvular disease is often present in these cases, and it is necessary to say a word about the modification of certain murmurs that accompanies this condition.

When a continuously irregular pulse occurs in a case of disease of the aortic valve the characteristic murmurs of aortic stenosis or aortic regurgitation are present and are not modified by the fact that the pulse is irregular.

The case, however, is quite different when there is disease of the mitral valve. If there be mitral regurgitation a systolic murmur conducted into the axilla is present, be the heart's action regular or irregular; but if there be narrowing of the mitral valve—that is, mitral stenosis—the murmur varies according as the heart's action is regular or irregular.

In a case of mitral stenosis if the pulse be regular the murmur is presystolic in time. It is the well-known rumbling, crescendo murmur brought to an abrupt termination by a loud first sound. If the pulse be irregular the murmur is diastolic in time, diminuendo in character, and there will always be a distinct interval between its termination and the first sound. This difference depends upon a change in the action of the auricle when the heart ceases to beat with a regular action and takes on a disorderly rhythm. It depends upon the fact that when the heart is working regularly the auricle is contracting normally, but when the heart becomes irregular the auricle is fibrillating and incapable of co-ordinate contraction.

Summary.

To sum up, for the recognition of auricular fibrillation no elaborate instruments are necessary. The physician has only carefully to feel the pulse and apply the stethoscope to the heart. He may go one step further and take a radial pulse tracing with any form of sphygmograph, and then the disorderly irregularity of the pulse becomes obvious, and he is in a position to say the auricle is fibrillating.

Historical.

How has fibrillation of the auricle come to be regarded as the pathological basis on which depends a continuously irregular pulse?

To Dr. James Mackenzie we primarily owe our knowledge. Dr. Mackenzie first discovered that in venous or jugular pulse tracings a wave which was invariably present in all hearts with a regular rhythm, a wave due to the contraction of the auricle, was constantly absent in patients in whom the pulse was continuously irregular. The absence of the auricular wave in venous pulse tracings indicated that the auricle was not contracting—at all events, was not contracting at its proper position in the cardiac cycle, namely, about one-fifth second before the contraction of the ventricle, and in 1902 Mackenzie[2] assumed that the auricle was paralysed in all cases exhibiting a continuously irregular pulse. Subsequently, however, from autopsies in cases watched for a number of years, he found that the auricles were not infrequently hypertrophied. Such a condition was not compatible with paralysis extending over a period of years, and in 1908 Mackenzie[3] assumed that the auricle was contracting synchronously with the ventricle in these cases of continuously irregular pulses, and he applied the term "nodal rhythm" to these cases, indicating that the stimulus for contraction arose in some place where the auricles and ventricles could be affected simultaneously, namely, in the auriculo-ventricular node.

In 1906 Cushny and Edmunds produced experimental fibrillation in the dog, and drew attention to the similarity in the irregular pulse tracings of the dog and the irregular pulse tracings of Mackenzie's patients. It was not until 1909, however, that Lewis brought things to a final issue. He produced experimental fibrillation in the dog and took graphic records of the jugular and radial pulses. These tracings were shown to Mackenzie, who recognized them as exactly similar to those obtained from his own patients with irregular pulses. Lewis then took electrocardiograms of the fibrillating auricles in the dog, and found certain oscillations were induced by the fibrillation. He then took electrocardiograms of cases similar to Mackenzie's, and found the same oscillations present. In his recently published *Mechanism of the Heart Beat* he very ably proves that in animals and in human beings in whom the pulse is totally irregular the auricles are fibrillating, and his results have been confirmed by other workers.

WHAT ARE THE SYMPTOMS OF AURICULAR FIBRILLATION?

There are practically no symptoms that are peculiar to continuous irregularity of the pulse—that is, to auricular fibrillation—apart, of course, from the symptoms due to the accompanying valvular disease or dilatation that may be present.

In other words, a patient with a continuously irregular pulse may be no more conscious of the irregularity than is another patient of the regularity of his pulse. There may be no symptoms at all, and the patient may be able to perform arduous labour, physical or mental, for many years though the heart remain permanently irregular.

The irregularity, however, hampers the heart's action, and, though the favourable condition may persist for years, symptoms of heart failure arise sooner or later, insidiously or rapidly, the symptoms being dyspnoea on exertion, oedema, cyanosis, etc.

We may say, therefore:

> If no heart failure—no symptoms of the irregularity of the heart.
> If heart failure—symptoms in proportion to the amount of heart failure.

Just as certain patients are liable to sudden attacks of very rapid but regular heart action, attacks we speak of as "paroxysmal tachycardia," so others are liable to paroxysms of very rapid but irregular heart action—that is, paroxysmal fibrillation. The study of cases in which the fibrillation is paroxysmal teaches us something about the symptoms peculiar to the condition apart from those due to heart failure.

As a rule, when the heart departs from its normal rhythm the patient becomes conscious of the change, but when the rhythm is fully established he may be oblivious of any abnormality.

The following case illustrates some of these points, and further shows that paroxysmal fibrillation may occur in a patient previously subject to paroxysmal tachycardia:

A. S., aged 21, electric wire tester, has well compensated mitral stenosis and regurgitation of rheumatic origin. The heart's action is quite regular. She was admitted into the Queen's Hospital on October 19th, 1911, with an attack of tachycardia, in which the pulse was continuously irregular with a rate varying between 120 and 160 per minute. The attack lasted four days, coming to an abrupt termination, leaving the patient quite comfortable with a regular pulse of 80 per minute. During the paroxysm, however, she felt very ill, and thought she was going to die. She had never suffered from shortness of breath, even after considerable exertion, nor from palpitations until January, 1911, when she fell downstairs. Ever since this accident she has been breathless on exertion, and, in addition, has been liable to attacks of "palpitations," similar, so she says, to the attack with which she came into hospital, but of shorter duration. These paroxysms were brought on by any excitement or by exertion. She was conscious of their onset and offset; in her own words: "The heart would give a hard thump and off it would go. Once started it stopped only of its own accord, giving another hard thump before it did so." At the onset of each attack she became excited and breathless, but during the paroxysm she felt quite comfortable so long as she lay down.

The paroxysms that occurred before she entered hospital differed from the one observed in hospital in two respects: (1) They were of shorter duration, varying from ten minutes to about twenty-four hours. (2) The heart's action, and consequently the pulse, was quite regular.

In a paroxysm that occurred on April 21st a sphygmographic tracing showed a regular pulse of 200 per minute during the attack and a rate of 72 per minute immediately afterwards.

THE ETIOLOGY OF AURICULAR FIBRILLATION.

The cases fall into two groups:

1. A rheumatic group. The patients are young; the average of 45 cases with a history of rheumatism was 34.
2. A non-rheumatic group. The patients are past middle age; the average of 22 cases was 58.

In the rheumatic group valvular disease may or may not be present, but if present, mitral stenosis is by far the most common form.

The non-rheumatic group includes that form of heart disease generally known as myocardial degeneration, cardio-sclerosis, or the senile heart. It may be associated with arterio-sclerosis, granular kidney, aneurysm, etc.

PROGNOSIS OF AURICULAR FIBRILLATION.

The prognosis of a case of heart disease with a continously irregular pulse will be estimated in much the same way as though the pulse were regular. It will depend upon the age, occupation, and social position of the patient. Broadly speaking it will depend upon the amount of work the heart is capable of doing without the production of any symptom of heart failure.

The question is, Should the irregularity be taken into account in prognosis or may it be ignored?

To this the answer is: The condition of the heart responsible for the irregular pulse does of necessity embarrass the circulation, but the amount of this embarrassment differs within wide limits. Thus, Mackenzie has watched cases for over ten years, and on the other hand, he quotes cases in which death has occurred within a few weeks of the inception of the irregular rhythm.

The following is a case of auricular fibrillation which I have watched for seven years:

H. H., aged 58, fitter, first suffered from shortness of breath and oedema of the legs in December, 1904. In October, 1905, he was admitted into Queen's Hospital with oedema of the legs, shortness of breath, irregular pulse, enlarged liver, and ascites. Ever since he left the hospital he has been able to earn his own living, but has had to give up his work eight or nine times, though never for longer than a week.

He has had a continuously irregular pulse ever since his breakdown in 1904. He goes about three months at a time without drugs, and as soon as he feels his breath beginning to fail he comes to the hospital for a further supply of medicine, which in his own word "puts him right again in a few days." He takes tinct. strophanth. ♏x, tinct. nucis vom. ♏x, liq. trinitrini ♏j. He has had no oedema since 1905. His pulse is continuously irregular, its rate about 70 per minute. The lips are always somewhat cyanosed, he can walk for two to three hours at a time at about two miles per hour. The heart is considerably enlarged, there are no murmurs.

It is certainly remarkable that auricular fibrillation should have such a slight effect in disturbing the circulation, for, as we have said, patients with auricular fibrillation may continue in vigorous health and be capable of strenuous mental and physical effort for years.

Fibrillation of the ventricles is quite another matter. It rapidly brings the circulation to a standstill, and is probably the cause of many cases of sudden death. The fact is, the auricles are not indispensable to the circulation of the blood; they are but temporary reservoirs, which accommodate the blood flowing to the heart while the ventricle is in systole. We know that in animals and in human beings alike the auricle may contract synchronously with the ventricle, the contraction of the ventricle may precede that of the auricle, the ventricle may contract at a rate quite different to that of the auricle, and in all cases the circulation goes on unhindered.

TREATMENT.

This form of heart disease is the one which responds above all others to the action of digitalis and its allies and, indeed, it is for this reason that the recognition of the condition is of such importance. It matters not which preparation of digitalis is used. Personally, I use for the most part Nativelle's digitaline granules, $\frac{1}{200}$ grain, and following Mackenzie's advice, I push the drug till the pulse falls to about 50. I stop it, however, earlier if symptoms of excess of the drug occur. These are: Nausea, vomiting, headache, or a general feeling of malaise. When such symptoms arise the drug is omitted for a day or two and then continued in smaller doses, the object being to keep the pulse under 70 beats per minute. Sometimes, however, the patient feels most comfortable with a slower pulse—for example, 50 per minute—and then a sufficiency of the drug is given to keep it at this rate. In any case one must be guided by the patient's own sensations, and it is remarkable how he learns to know the amount of digitalis that suits him best. In a severe case of heart failure I start with one granule of Nativelle's digitaline every four hours, then when the pulse is slow or a reaction present, after stopping it for a day or two, I continue with two granules a day, and later with one, or sometimes with one every other day or one twice a week. It is very noteworthy how patients who have been admitted into hospital with acute symptoms will go to their work and continue at it for prolonged periods so long as they continue to take small doses of digitalis.

When using tincture of digitalis I substitute 15 minims for each granule, so that an acute case is treated at the start with 1½ to 2 drachms a day—that is, 15 minims every three or four hours. It has been said that while marked reaction to digitalis occurs in rheumatic cases of auricular fibrillation, it does not occur in the non-rheumatic cases. It must be remembered that the rheumatic cases occur in younger patients, the average age being 34, while the non-rheumatic cases occur in older patients, the average age being 58. In the latter group, in addition to cardio-sclerosis, all the concomitant degenerations of arterio-sclerosis in other organs are present, and therefore we should not be surprised at the failure of any drug to relieve the symptoms of heart failure in these cases. Be it so or not, many cases of the senile group have responded remarkably well.

The following are two severe cases of mitral disease of rheumatic origin with auricular fibrillation which have responded well to digitalis:

R. A., aged 37, brassworker, had chorea twenty-seven years ago. He has been short of breath for years, but suffered no serious inconvenience till one day in August, 1908, when his breath suddenly failed while he was cycling. He was obliged to give up all work for nine months and spent three weeks of this time in the Queen's Hospital, when he was found to have mitral stenosis and regurgitation with fibrillation of the auricles and consequently a continuously irregular pulse. He has pursued his arduous occupation for nearly three years with three breaks, one of a week, one of a fortnight, and recently one of a month. In each breakdown he is very breathless and cyanosed, the liver is large and pulsating, and the pulse rapid, irregular, and hardly perceptible. During these three years he has taken digitalis more or less constantly, and attributes each breakdown to neglecting his medicine. Be this as it may, he soon recovers on tincture of digitalis 10 to 20 ♏ three times a day.

G. D., aged 42, omnibus conductor, had three attacks of rheumatic fever thirty-four, twenty-seven, and twenty-one years ago. He has been short of breath for the last twenty-one years, but able to remain at work without interruption until three years ago. He then had a serious breakdown and was unable to work for fourteen months. He was told that he would never work again. He came into Queen's Hospital two years

ago and was found to have mitral stenosis and regurgitation with auricular fibrillation and a continuously irregular pulse. Since his discharge he has done two years' continuous work with one interruption of three months. His work involves standing for many hours a day and constantly running up and down the staircase of an omnibus. He has taken digitalis continuously during these two years and says that he is entirely dependent on the drug.

The following case of myocardial degeneration with auricular fibrillation responded well to digitalis, although the patient was a man of 70 years of age.

J. W., aged 70, metal smith, was admitted into the Queen's Hospital on June 7th, 1911, suffering from shortness of breath, cough, and expectoration of gradually increasing severity for the past four years. On admission there was orthopnoea, cyanosis of the lips and ears, oedema of the legs, a large pulsatile liver, an enlarged spleen, and a rapid, small, continuously irregular pulse. Both ventricles were of large size, but the emphysematous condition of the lungs made it difficult to define the exact boundaries. There was a systolic murmur at the apex, audible in the axilla and at the tricuspid area. After twelve days' rest in bed, without drugs, the oedema had disappeared, but the pulse remained at about 90 per minute. A week later, after taking two granules of Nativelle's digitaline per day, the pulse had slowed to 60 per minute. Coincidently with this slowing the general condition of the patient greatly improved, and five weeks after his admission he left the hospital. All the cyanosis had gone, cough and expectoration had ceased, and the patient was able to mount stairs without any discomfort.

The following is a case of myocardial degeneration with auricular fibrillation in which the patient improved under digitalis in spite of the fact that he had cancer of the liver.

T. H., aged 56, bricklayer, was admitted into the Queen's Hospital on August 23rd, 1911, with carcinoma of the liver and a failing heart, evidenced by shortness of breath, cyanosis, oedema of the legs and back, ascites, and a continuously irregular pulse of very small amplitude, of about 100 per minute. Both ventricles of the heart were enlarged, but emphysema made an exact definition impossible. There were no murmurs. Rest in bed without drugs for six days did not improve the condition of the circulation, but six days later, after having taken 29 granules of digitaline, the pulse was 57 per minute, and of good volume, all cyanosis and oedema had disappeared, and the ascites had diminished. A month later still, on 1 granule of digitaline per day, all ascites had disappeared, and the patient could mount stairs without any discomfort. This improvement in the heart's action has been maintained until the present time, although the patient is losing strength and flesh as the result of malignant disease of the liver.

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THE MANAGEMENT OF CARDIAC FAILURE IN DIPHTHERIA.

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THE rational treatment of all forms of cardiac failure is to remove the cause or causes whenever possible; at the same time to consider the pathological changes in the cardio-vascular system with a view to amelioration of such changes; lastly, to consider the clinical aspect with a view to tiding the heart over the period of stress and preventing or relieving serious symptoms. With regard to the causal factor in diphtheria, it will generally be admitted that the action of the toxin on the heart muscle, resulting in certain degenerative changes, is the main cause of failure. The result of this action, though it can largely be prevented by the early, free administration of antitoxin, cannot be remedied once it has taken place. Unfortunately, in too many cases the antitoxin is not administered until the patient is admitted to hospital, often as late as the fourth or fifth day of the illness. The consequence is that valuable time is lost, and the main cause of cardiac failure may be beyond control. With reference to subsidiary causes, the early loss of appetite which so frequently occurs in diphtheria is a predisposing cause; whilst, on the other hand, the feeling of malaise probably exerts a beneficial influence, inasmuch as it necessitates rest, and so diminishes the heart work. That this point is of some importance seems evidenced by the fact that many patients who are conveyed by ambulance over considerable distances show on admission definite signs of cardiac depression, which pass away after a night's rest. There are, of course, many other factors tending to cause cardiac failure which may come into play in the case of adults suffering from diphtheria, but the main cause is the specific toxin, and it is largely under our control if adequate treatment is commenced early enough.

PATHOLOGICAL INDICATIONS.

Seeing that the changes which occur in the heart muscle are degenerative in nature and are so rapid, they furnish few indications for treatment. It is important to note, however, that in those cases characterized chiefly by failure of tonicity eliminative treatment by purgation and leeching is not only useless, but positively dangerous.

CLINICAL INDICATIONS.

Unfortunately we frequently see cases in which the causal factor has passed beyond our control, and we must rest content with expectant treatment. We therefore attempt to assist Nature in her efforts to promote resistance sufficiently prolonged for the patient to throw off the disease, at the same time guarding against possible complications—thus, by the rational administration of food and stimulant (if required), attention to sleep, and to the excreta, we endeavour to tide the patient over the crisis.

With reference to complications affecting the circulation, undoubtedly the most serious is that type of cardiac failure associated with persistent vomiting. It is so fatal and its early recognition so important that I append a note on its differential diagnosis. When a patient suffering from severe diphtheria begins to vomit after the seventh day of the illness, we must remember that there are several possible explanations; thus, it may turn out that the dreaded cardiac vomiting has supervened, whilst, on the other hand, the vomiting may be due to the onset of scarlet fever. It is not possible to exclude scarlet fever with certainty at the commencement, as it sometimes begins with vomiting, associated with a normal or subnormal temperature. However, a few hours generally makes the diagnosis clear. Measles may also commence with vomiting, and the fact that it is frequently afebrile in its very early stages and not infrequently commences without even coryza or suffusion of the conjunctiva may mislead one, unless a sharp look-out is kept for Koplik's spots.

Serum reaction may commence with an attack of vomiting and cardiac depression (especially the urticarial type of serum rash), but here again the lapse of a few hours generally clears up the diagnosis.

"Cardiac" Vomiting.

The following signs indicate the probability of myocardial involvement:

1. *Certain Types of Faucial Attack.*—When the faucial attack is severe and is complicated by involvement of the naso-pharynx and palate, the probability that the onset of vomiting may indicate commencing cardiac failure is considerable.

2. *Rapidity of the Pulse.*—It is generally recognized that in simple febrile conditions, for every rise in temperature of 1° F. there is corresponding increase in the frequency of the pulse of 10 beats per minute. Whenever in diphtheria the pulse-rate increases out of proportion to the rise of temperature, involvement of the myocardium may be suspected. This sign, which was observed by Dr. Caiger many years ago, is one of the earliest and most reliable indications of threatened failure.

3. *Auscultatory Signs.*—The presence of the extra-systole with or without a consecutive intermission of the heart's action is also important evidence that the heart wall is involved in the morbid process. It carries with it a grave prognosis, when it first appears between the seventh and seventeenth days, but when it commences after the first three weeks its prognostic significance is more favourable. In addition to the above, reduplication of the first sound, followed by accentuated second, is a sign of advanced myocardical disease, as is also marked approximation. On the other hand, shortening of the first sound, accompanied by prolongation of the interval between it and the second sound, is an indication of less advanced disease. Lastly, in some cases in which the function of contractility is depressed, the heart sounds may become almost inaudible.

4. *Anginoid pains* occur, and are strong evidence of myocardial failure. Adult patients voluntarily complain of intermitting pains in the left arm, associated with a sense of constriction in the chest. Small children may suffer from pain during the stage of cardiac vomiting, and it is frequently referred to the abdomen, especially the epigastric region. Its cardiac origin may be suspected when it is relieved by hot applications to the precordial region.

5. *Urine.*—The amount secreted rapidly diminishes, and there may be complete suppression. Albumen may be present. It is commonly averred that albuminuria is an early and characteristic sign of diphtheria. Our experience, however, goes to prove that it is found in the more serious type of case only. It is consequently of less value as a diagnostic sign than is commonly stated.

6. *The Liver* is generally enlarged.

TREATMENT.

Treatment of patients suffering from cardiac failure accompanied by persistent vomiting should be conducted on the following lines:

1. *Position of the Patient in Bed.*—The head should be low to prevent cerebral anaemia, while the foot of the bed should be elevated. This may help retention of the rectal feeds.

2. *Clothing.*—Patients during the stage of cardiac depression become restless and throw off the bedclothes. They should therefore be warmly clad, and for the same reason hot-water bottles should be placed in the bed.

3. *Nourishment.*—All food by the mouth should be stopped and nutrient enemata administered. The rectum should be irrigated twice daily with warm boracic solution, otherwise irritation may be set up, and retention of nutrients become impossible.

Treatment of the Cardiac Depression.

This must be combated by the administration of medicines. Various drugs have been used for this purpose, chief amonst them being strychnine, belladonna, and adrenalin. Since administering them in combination hypodermically we had four successful cases, though, of course, we have also had our failures. The formula used is as follows:

Atropine sulphate	$\frac{1}{100}$ gr.
Strychnine hydrochloride	$\frac{1}{100}$ gr.
Adrenalin chloride solution (1 in 1,000)...	5 m
Aq. ... ... ad	10 m

To be administered hypodermically every four hours.

That the above-mentioned combination exercised a beneficial influence on the favourable course the cases followed I am convinced, and in this opinion I am supported by Dr. Foord Caiger, who watched the cases with me from the very commencement.

Treatment of Urgent Symptoms.

Thirst.—This is first met by the administration twice daily of small enemata of normal saline solution, whilst teaspoonful doses of iced water may be allowed as soon as the vomiting ceases.

Dryness of the Mouth may be alleviated by the application of such remedies as glycerine and boracic acid, half strength.

Pain is most rapidly relieved by the frequent application of hot fomentations to the precordium.

Constipation.—It may be necessary to obtain an action of the bowels, and it is important to bear in mind that, owing to the serious cardiac depression, all purgatives are contraindicated. For this reason small enemata of glycerine and water are preferable.

CASES OF CARDIAC VOMITING WHICH RECOVERED UNDER THE TREATMENT ADVOCATED.

CASE I.

R. C. M., aged 8 years, was admitted to the South-Western Fever Hospital on October 26th. He had been quite well on October 21st; on October 22nd he vomited and complained of sore throat; and on October 24th swelling of the cervical glands, nasal discharge, and cough were observed.

On admission a deposit of thick opaque membrane completely covered the inner surface of both tonsils and extended to the uvula. There was also general swelling and oedema of the fauces. The cervical glands were much enlarged and rhinorrhoea was profuse. The heart apex beat in fifth interspace in left nipple line. The heart sounds a little sharp and spaced. Pulse 114; 12,000 units of antitoxin were injected and strychnine and brandy administered by mouth. October 27th: The edges of membrane are beginning to curl up, physical signs remain unchanged, no albumen in urine. 8,000 units of antitoxin administered. October 28th: Membrane shows signs of disintegrating; cervical glands less swollen; physical signs in heart unchanged, but albumen one-eighth present in urine. Pulse 96; temperature normal. October 29th: Membrane peeling off. No change to note except that pulse is more rapid, 112. The patient progressed without material change until the evening of November 4th, when he complained of not feeling so well. November 5th: Patient collapsed, inclined to vomit, general condition bad, surface cyanotic and extremities cold. The apex beat was well inside the left nipple line; the first sound showed the characteristic reduplication. Lower border of liver below the costal margin. Only passed 8 oz. of urine; albumen present. Treatment as above. November 6th: Patient vomiting persistently. Tongue dry. Extremities cold. Hepatic enlargement remains. Pulse 130; temperature subnormal. November 7th, 8th, and 9th: Vomiting continuous. Pulse almost imperceptible at wrist. November 10th: Only vomited once. Liver enlargement less marked. November 11th: Vomiting ceased. Tongue moist and cleaning. Pulse 108, much stronger. November 12th: Pulse 96, force good, rhythm regular. Passed 14 oz. of urine. November 13th, 14th, and 15th: No recurrence of vomiting and patient able to take food by mouth in sufficient quantities; felt much stronger. Urine increasing in quantity. November 16th: Complains of "pins and needles" in feet. During the next six weeks the patient suffered from paralysis of the muscles of accommodation, and ocular movements were paralysed, as also were the constrictors of the pharynx, adductors of the larynx, and also the diaphragm. Eventually the patient made a good recovery and was able to leave his bed for a short time on December 28th.

CASE II.

E. P. was admitted on February 27th with the usual history, and a copious exudate on tonsils and uvula. On March 7th she commenced to vomit, and showed the usual signs of cardiac depression, with oedema and dilatation. Rectal feeding was ordered, together with four-hourly injections of the solution of atropin, strychnine, and adrenalin; vomiting ceased after the second day of treatment, but the signs of myocardial involvement lasted for several weeks. Finally, after passing through a severe attack of post-diphtheritic paralysis, she eventually recovered.

CASE III.

W. L. G., aged 3 years and 2 months, was admitted on April 21st. The history was that he had vomited on April 12th, had sore throat on April 20th, and on April 21st swelling of cervical glands. On admission, there was injection of the fauces, an exudation covering either tonsil, and profuse rhinorrhoea; 12,000 units of antitoxin were administered, but the membrane continued to spread. On April 22nd vomiting commenced, and signs of cardiac failure, associated with a dilated left ventricle, appeared; the patient continued very ill for some days, showing most of the signs of cardiac depression above enumerated. Eventually the vomiting ceased and the heart gained in strength, and the patient made a gradual but satisfactory recovery. It is of interest to note that this patient suffered from several attacks of epistaxis, and several petechial spots appeared on the neck.

CASE IV.

A. T., aged 28 years, was admitted on July 3rd with the following history:—June 30th: Headache and sore throat. July 2nd: Cervical glands enlarged. On admission examination revealed extensive exudation covering both tonsils, which were so swollen as to almost meet in the middle line. The exudate also extended to the uvula and soft palate. Submaxillary glands much swollen on both sides. Heart sounds normal. Pulse 76, colour good; 16,000 units of antitoxin were administered. July 4th, 5th, and 6th: Exudation no less, otherwise not any change. July 7th: The patient feels better, the greater part of the exudate has separated. July 8th, 9th, and 10th: No change except that the patient had some difficulty in opening his mouth, in spite of the cervical glandular swelling having disappeared. July 11th: Persistent vomiting since early morning, patient collapsed. Heart sounds very weak, occasional extra systoles present. July 12th: Vomiting still. The apex beat was inside the left nipple line; the heart sounds weak; extra systoles followed by intermission. Some complaints of throbbing and feeling faint. Urine 13 oz., heavy deposit of albumen. July 13th: No more vomiting; pain in arm running down to wrist associated with a sense of tightness across the upper part of the chest; the pulse was intermittent; no extra systoles; impulse no stronger. July 14th: Cardiac action stronger; no vomiting. Heart sounds rather spaced, albumen still present. July 16th: Complained of cardiac pain after an enema. No signs of dilatation; no vomiting; heavy deposit of albumen. July 17th: No more pain; no vomiting; thick deposit of albumen. July 19th: Heart action much stronger, but first sound reduplicated; albumen less. July 22nd: Heart action regular; no albumen; no bad symptoms. July 26th: No albumen in urine; sounds at cardiac apex weak but pure. From this date cardiac action gradually became normal, but the patient did not escape some degree of paralysis.

The above case is one in which the cardiac affection was failure of contractility. It is of importance, as it indicates that recovery from such a grave condition need not be despaired of.

Dr. Caiger has kindly allowed me to use the notes of the above cases.

SUPRARENAL GLAND EXTRACT IN CARDIAC DYSPNOEA AND CARDIAC DROPSY.

BY

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THE practitioner often has to deal with failure of compensation in cardiac cases. Digitalis, strophanthus, convallaria, caffeine—all are useful in their turn; but sometimes one and all may fail us. There is no doubt that strychnine hypodermically is an invaluable remedy in failure of cardiac compensation; that the nitrites are of great service in some cases; that atropine subcutaneously relieves the dyspnoea of others; that potassium iodide is not to be despised as a heart tonic, and that the Nauheim bath treatment, judiciously applied and carefully supervised, does wonders in the early stages of compensation failure.

But there is another remedy which can be relied on in some cases. This is suprarenal gland—the solution of the extract of the gland, used hypodermically or by intravenous injection, or the gland substance, given by the mouth in tablet form.

I have had under my care several cardiac cases in which dyspnoea and dropsy were prominent symptoms, and in which suprarenal gland was administered. I propose here to give a report from my notes on two of these cases only. In the others the action of the remedy in combating the symptoms was maintained. In all, more or less severe dyspnoea was relieved, sometimes by the hypodermic injection of from 5 or 10 to 15 minims of the 1 in 1,000 adrenalin solution (Parke, Davis and Co.), at other times by a 5-grain tablet of the suprarenal gland substance administered by the mouth. When the dyspnoea was not very severe, the dose of adrenalin solution injected hypodermically was from 5 to 10 minims (1 in 1,000 solution), and the 5-grain tablet of the gland substance was halved for each dose by the mouth. In general practice one cannot always make provision for the amount of urine passed by the patient in twenty-four hours to be accurately measured. But where I succeeded in making such provision while my patients were under treatment by hypodermic injections of adrenalin or by the tablets of suprarenal gland substance administered by the mouth, I almost invariably found the quantity of urine increased and the dropsy at least temporarily diminished by the treatment. Sometimes the apparent effect of the remedy in this respect was marked and striking.

The following are notes of the two cases referred to—the one taken as typical of the graver form of disease, that in which the valvular lesion is accompanied by general arterial sclerosis; the other, a milder and uncomplicated case of morbus cordis.

CASE I.

On January 14th, 1905, a railway engine driver, aged 51, applied, with a history of injury to the left arm, supposed to have been caused by a strain while at his work when dragging a heavy weight. A little while afterwards he had felt, first, pain in the left arm, then a sensation of numbness in the arm.

There were no bruises or swelling; the power of grip of the left hand was considerably less than that of the right; the mouth was drawn slightly to one side; the temporal and radial arteries were tortuous and could be rolled under the examining finger; there was a well-marked double aortic bruit.

After some weeks of absolute rest, with an ice-cap to the head during part of the first forty-eight hours, and with the application of warm Droitwich packs to the left arm afterwards, the pain disappeared from the arm, the grasping power of the left hand became almost equal to that of the right, and the mouth was not so noticeably drawn to one side. After a couple of weeks' more rest, the facial muscles appeared to have completely recovered their equilibrium.

When the patient began to go about again he complained occasionally of giddiness and some difficulty of breathing. After twelve artificial Nauheim baths (temperature 100° F., reduced to 98° F.)—at first two and afterwards three a week, given shortly before bedtime—he felt so much better that he wanted to go back to his work.

In June, 1905, he could no longer be persuaded to continue treatment, and returned to his duties on the railway. I did not see him again before October of the same year, when, the dizziness and dyspnoea having returned and become very troublesome, the Nauheim baths were used again. At first they again acted beneficially, reducing the increased pulse-rate and relieving the dyspnoea as well as the giddiness. But after about half a dozen baths the patient no longer gave himself the necessary amount of rest; he went out of doors when it was cold weather and over-exerted himself in walking. In place of slowing the pulse-rate, the baths were now found to increase it. I then discontinued them, and during the greater part of October and November tried in turn digitalis, strophanthus, and potassium iodide, with aromatic spirit of ammonia and belladonna tincture; these remedies, as well as the nitrites and trinitrin, failed to give any relief from the troublesome dyspnoea, which was almost constantly present, but which the patient found most trying and irksome at night. Strychnine and atropin in hypodermic injections at bedtime gave some relief. In December dropsical swelling made its appearance, first at the ankles, then higher up the legs, then in the scrotum and abdomen.

On December 15th, at night, extreme dyspnoea called urgently for relief, and I injected 15 minims of adrenalin solution (1 in 1,000) subcutaneously. The quantity of urine passed during the previous twenty-four hours had been barely 6 oz. There was almost immediate relief from the dyspnoea, and that night the patient slept more than five hours consecutively. Early next morning, finding that the dyspnoea was returning, I again had recourse to adrenalin subcutaneously; it was repeated in the afternoon and again at night. When, at the end of twenty-four hours, the quantity of urine voided since the previous evening was measured, I found an increase from 6 oz. to 24 oz. During the following five days I continued the adrenalin treatment, and also put the patient on a saltless diet, tarragon vinegar and celery with tomato being given as relishes with food, in place of salt.

The following table, taken from my notes, shows the increase in the urine (measured at 10 p.m. each day) during the six days of treatment:

December 16th, urine measured	26 oz.
December 17th, " "	37 "
December 18th, " "	49 "
December 19th, " "	51 "
December 20th, " "	111 "
December 21st, " "	125 "

When the patient was seen on the morning of December 22nd it was found that he had had a very good night, having slept for more than nine hours almost continuously, and without any difficulty of breathing. He was able to get up and go about the house before going out of doors again in a bath-chair.

In the following year, when he had a relapse, the adrenalin treatment again relieved the dyspnoea and increased the quantity of urine (measured at 5 a.m. each day) for each twenty-four hours, as the following table taken from my notes shows.

On January 5th, 1906, the urine measured 18 oz. Adrenalin given subcutaneously three times, and continued during the following days (without saltless diet).

January 6th, urine measured	20 oz.
January 7th, " "	43 "
January 8th, " "	116 "
January 9th, " "	102 "

There was again a temporary rally; but towards the end of January there was another severe attack of dyspnoea, with increased dropsical swelling. On February 5th, and again on March 10th, paracentesis abdominis gave some relief, but the symptoms of failure of compensation could no longer be checked after this.

CASE II.

While this case was under treatment I was, on February 14th, 1906, called to see a lady with dyspnoea and commencing ascites. There was in this case a loud mitral, systolic bruit, with failure of compensation showing itself by bronchial catarrh, as well as dyspnoea and swelling of the legs. There was also some swelling of the face. The urine contained albumen. On February 14th I injected hypodermically 10 minims of adrenalin solution (1 in 1,000). This was repeated in the evening, and the patient, who had had no sleep whatever during the previous night, slept for three or four hours. The quantity of urine measured for the twenty-four hours ending at 9 a.m. on February 15th was 29 oz. As the patient could not be brought to restrict herself to either the salt-free diet or to an exclusively milk diet, ordinary diet was continued, and two hypodermic injections of adrenalin (1 in 1,000) were given daily (7 to 10 minims each dose).

Table showing Quantity of Urine Passed Day by Day (measured at 9 a.m.) while under this Treatment.

February 15th, urine measured	29 oz.
February 16th, " "	37 "
February 17th, " "	49 "
February 18th, " "	76 "
February 19th, " "	74 "
February 20th, " "	89 "
February 21st, " "	93 "

After February 21st only one injection of adrenalin was given in the evening, and during the day one tablet of suprarenal gland substance (5 grains). This treatment was continued for four days. On February 25th all dropsical swelling had disappeared from the legs and from the face; there was no longer any albumen in the urine, the quantity of which (measured for 24 hours) was found to be nearly 90 oz. There was no longer any dyspnoea; the patient ate and slept well. She resumed her ordinary house duties.

A CASE OF ANGINAL SPASM OF EXCEPTIONAL DURATION.

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WE are so accustomed to look upon angina pectoris as a disease in which the patient either dies or recovers from the spasm in a very short time—certainly under an hour—that a case in which the spasm lasted for a whole night is of sufficient interest to place on record.

The patient was a retired gentleman in his 80th year. Some twenty years ago he had a severe attack of diphtheria which left no evil effects in the way of paralysis, etc. From that time he had no illness worth mentioning, and in latter years especially his health was excellent—in fact, after he was 70 he visited friends both in South Africa and in the United States, and only the year before his death he had a motor run of 100 miles, returning by train the same day, without experiencing the slightest undue fatigue.

His first attack of angina was on June 29th, 191.; other attacks followed on July 3rd, August 16th, September 8th, 9th, and 10th. The last attack was the prolonged one lasting from 9.20 p.m. to 6.25 a.m. Several of the earlier ones were fairly severe, but in each case the spasm soon yielded (less than half an hour).

No signs of cardiac disease were to be detected, the sounds were good and clear, the apex not displaced outwards, and the right heart boundaries normal. The arteries were quite soft and the arterial tension slightly below the average. Urine was normal, with no trace of albumen. There was no respiratory trouble of any kind. He had a hearty appetite, but took a fair amount of exercise, being a good walker.

The last attack began at 9.20 p.m., after he had retired for the night. As it did not yield to amyl nitrite inhalations, I was sent for. I found him in great distress; he was gasping for breath and complained of great tightness in the upper part of the chest. The pain was most severe; it was situated near the upper part of the sternum, radiating up both sides of the neck to the ears, hardly any passing down the left arm. He was propped up in bed, his face slightly flushed, but by no means cyanosed; the pulse very slightly affected in either wrist.

When I saw him he had already inhaled the contents of two amyl nitrite capsules (5 minims each) and taken a dose of carminative medicine, which had previously been of service in relieving flatulence. I gave him a hypodermic injection of $\frac{1}{50}$ grain nitroglycerine, and, as this produced no effect, I gave him an injection of scopolamine and morphine ($\frac{1}{200}$ and $\frac{1}{4}$). Again I was disappointed, no improvement following. I then administered chloroform on a Skinner's mask, and he became easier, the spasm passed off completely, and the breathing was deep and peaceful. In about twenty minutes I stopped the chloroform, thinking that the spasm would not now return, but, with recovery of consciousness, it slowly reappeared, and was eventually as severe as before. The only way to give the patient any relief was to resort to chloroform, and this I continued to administer at intervals until 6 a.m., when the spasm relaxed, passing off altogether at 6.25 a.m.; the patient then had two hours' natural sleep. During the night I used nearly a pound bottle of D. and F. chloroform. Except when under the influence of chloroform, there was no relaxation of the spasm from 9.20 p.m. to 6.25 a.m. The sense of impending death was markedly present. The pulse was never markedly affected, at times a little irregular. It gradually increased in rate and became smaller in volume.

The next day he expectorated some plugs of dark-coloured mucus, suggestive of pulmonary embolism; but the most careful examination of the chest revealed no signs of one. A few days later (September 13th) I found a small spot on the right base which was dull on percussion, and where some moist sounds could be heard (the following night he had a slight rigor), but these signs soon cleared up, and when examined in consultation a few days later no traces were found. At the most there were barely six pieces of blood-stained mucus expectorated.

He had no other attacks, and in the next week slowly gained strength, his appetite markedly improved, and he felt altogether better; but the improvement did not continue, he became gradually weaker, and died quite peacefully in his sleep ten days after the prolonged attack. All this time his pulse had been rapid (90 to 100), frequently irregular and intermittent, and always very weak, especially so the last few days. The heart sounds were distinctly heard, but very feeble—especially the first. The temperature kept low, usually 96° to 97°, except on the night of the 13th, when there was a slight rigor, the temperature rising to 101.6°, but falling to normal by morning. The day before his death it went up to 99°, but only for a few hours.

It may be suggested that this was a case of pulmonary embolism, and not angina pectoris. But on reviewing the whole case I do not think this to be the correct diagnosis. Against this view we have the absence of any obvious source of the embolus; the previous undoubted anginal attacks unaccompanied by any pulmonary symptoms, the absence of cyanosis or of cough after the attack, as would assuredly have followed an infarction sufficiently large to have given rise to such severe symptoms. I take it that the course of events was as follows—an obstruction in some of the smaller branches of the coronary artery, insufficient in size to cause stoppage of the heart, but which obstruction was to some extent permanent, as evidenced by the subsequent cardiac degeneration. The time taken by the heart in accommodating itself to its reduced blood supply, accounted for the length of the attack. Probably owing to the obstructed coronary arterial flow, there was some stasis in the coronary veins where a small embolus formed, which accounted for the pulmonary symptoms. The coronary circulation probably never became completely re-established, but gradually more interrupted, and so caused the cardiac degeneration which finally brought about death.

RELIABILITY OF THE RESULTS OBTAINED BY THE WASSERMANN TEST ON SERUMS AND CEREBRO-SPINAL FLUIDS OBTAINED POST MORTEM.

BY

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(From the Pathological Laboratory of the London County Asylums.)

THE object of this paper is to record our experiences of the Wassermann reaction as applied to blood serums and cerebro-spinal fluids obtained *post mortem* from cases of insanity at the London County Asylum of Claybury.

We have been engaged upon this work during the past year, and, as our results do not accord with some recent publications on the same subject, Dr. Mott has suggested that we should record the results of our own observations.

In his Hunterian Lecture[1] Major French quoted the findings of Ponfik and Winckler to the effect that, of 101 specimens of serums from cadavera, 59 (that is, 60 per cent.) gave a positive reaction. Further, Luksch[2] states that of 309 *post-mortem* cases a positive result was obtained with the serums in 46 per cent., and he did not from this fact infer that all these 46 per cent. were cases of syphilis. Luksch believes that the occurrence of the Wassermann reaction shortly before or after death does not prove anything, because, in his opinion, serious diseases produce changes in the blood serum which may cause it to yield the reaction in question. This might take place a long time before the close of life. During the course of sepsis, uraemia, or pneumonia such changes were observed very often, even if the patient recovered completely. He considered that the Wassermann reaction was not pathognomonic of syphilis, because under certain conditions, both during life and after death, it might occur in persons who were free from syphilis. For this reason a pathologist was not entitled to diagnose syphilitic changes if the Wassermann reaction was present in the cadaver, and in cases of serious illness the physician must be careful not to rely too much on the reaction. More satisfactory results have been obtained by Nauwerck and Weichert, Schlimpert, Löhlein, and Veszprémi, but these observers have excluded *post-mortem* serums which were not obtained in a fresh condition.

Routine Method adopted at Claybury.

In all cases of death the bodies are placed in the cold chamber and the autopsy is made generally within twenty-four hours. The fluids are withdrawn at the time of autopsy, and if not tested on that day are placed in the ice chamber until the test is made (generally within a day or so), when the serum which has separated is pipetted off and inactivated in the usual manner.

The technique adopted in this research was that of the original Wassermann method described by one of us (J. P. C.).[3]

Results of the Investigation.

A total number of 112 cases have been examined, of which the cerebro-spinal fluid and the blood serum have been examined in 92 cases, the cerebro-spinal fluid alone in 20 cases. With regard to the cerebro-spinal fluid, it will thus be seen that 112 samples were examined, of which 25 were found to give a positive result. Each of these 25 cases

was shown by macroscopic and microscopic examination to be an instance of general paralysis, and in 17 of these cases where the serum also was examined a positive result was obtained. In 8 of these the cerebro-spinal fluid had been examined during the life of the patient with a positive result.

In 3 cases out of the remaining 87 the result of the Wassermann test was not in accordance with the clinical evidence and *post-mortem* appearances.

CASE I.—F. A case of general paralysis. Male, aged 42, dying of general paralysis of the insane and hypostatic congestion of lungs, gave a negative result both with the serum and cerebro-spinal fluid. (This fluid had become turbid from decomposition before the test was made.)

CASE II.—M. A case of general paralysis, gave a marked positive result with the blood serum, but a negative with the cerebro-spinal fluid. This case had given a positive result with the cerebro-spinal fluid during life. Death had been accelerated in this case by an acute meningitis. The fluid was purulent when withdrawn, and was crowded with streptococci and polymorphonuclear leucocytes.

CASE III.—J. A case of insanity (male, aged 68) other than general paralysis. The fluid showed some degree of complement deviation, which, however, was not sufficient to be accepted as a definite positive result. Decomposition had commenced in this fluid at the time of examination. Cause of death, bronchopneumonia.

We will explain later to what we consider these anomalous reactions to be due.

Examination of Blood Serum.

With regard to the 92 cases in which the serum was examined, as already stated, 20 of these were cases of general paralysis, and in only one (Case F.) was a negative result obtained. Of the remaining 72 cases, a positive result was obtained in only 10. Two of these cases died from rupture of a thoracic aneurysm, and there was undoubted evidence of previous syphilitic infection; in both these cases the cerebro-spinal fluid gave a negative result. In 2 of the cases there was found a marked nodular fibrosis of the aorta, which in Dr. Mott's opinion was undoubtedly syphilitic in character. In the remaining 6 cases there was no definite history or signs of previous syphilitic infection. They were as follows:

1. Female, aged 28. Acute melancholia. Cause of death: Pyaemia secondary to stomatitis and gangrenous tonsillitis. Serum: Positive. Cerebro-spinal fluid: Negative.
2. Female, aged 39. Melancholia. Cause of death: Acute ulcerative dysentery. Serum: Positive. Cerebro-spinal fluid: Negative.
3. Female, aged 41. Dementia. Cause of death: Carcinoma of cervix uteri with vesico-vaginal fistula; purulent cystitis and septicaemia. Serum: Positive. Cerebro-spinal fluid: Negative.
4. Female, aged 47. Mania. Cause of death: Tumour cerebri and pulmonary tuberculosis. Serum: Positive. Cerebro-spinal fluid: Negative.
5. Male, aged 57. Senile dementia with epilepsy. Cause of death: Bronchopneumonia. Serum: Positive. Cerebro-spinal fluid: Negative.
6. Female, aged 37. Melancholia. Cause of death: Pulmonary and intestinal tuberculosis. Serum: Positive. Cerebro-spinal fluid: Negative. The brain of this patient showed some evidence of congenital imbecility; and in the light of H. P. Dean's observations[1] our result on the serum may be correct.

In the remaining 62 cases a negative reaction was obtained on the blood serum. We have investigated the histories of these cases as fully as possible, but without finding any notes which would lead us to think that these results are incorrect, except in one case of marked tabes dorsalis, in which the cerebro-spinal fluid two years before death and also *post mortem* gave a negative reaction and the blood serum *post mortem* was likewise negative. In this case there was a history of syphilis contracted twenty years previously.

SUMMARY OF RESULTS.

Cerebro-spinal Fluid (Number of Cases examined, 112).

Number of cases of general paralysis giving a positive result	25
Number of cases of general paralysis giving a negative result	2*
Number of cases other than of general paralysis giving a negative result	85
Number of cases other than of general paralysis giving a positive result	—

* Cases F. and M.

Therefore out of 112 cases in which the cerebro-spinal fluid was examined *post mortem* a correct result was obtained in 110 instances (98 per cent.). Of the 85 cases other than general paralysis only one case gave the slightest evidence of retardation of haemolysis, not sufficient, however, to justify a positive reaction.

Serums (Number of Cases examined, 92).

Number of cases of general paralysis giving a positive result	19
Number of cases of general paralysis giving a negative result	1
Number of cases other than general paralysis examined	72
Number of cases other than general paralysis examined giving positive result	10 (14%)
Number of cases other than general paralysis examined giving positive result (but excluding 4 cases of undoubted syphilis)	6 (8.3%)

If our figures are contrasted with the 60 per cent. and 46 per cent. of positive results obtained by other observers on serums from cadavera, it will be seen that, after deducting the cases of general paralysis from our figures, we only obtained a percentage incidence of 14 per cent., and after deducting from these the undoubted syphilitic cases, we only obtained an apparently anomalous reaction in 8.3 per cent. We are therefore inclined to the opinion that the test, as applied to *post-mortem* material, is a very helpful one—at any rate, as far as the diagnosis of general paralysis is concerned, as well as for evidence of previous syphilitic infection. It is, however, not so reliable as the fluid withdrawn during life. There are limitations to its use, and to these we desire to draw attention.

Lubarsch's objection as to its reliability is based on the fact that such a large percentage of cases after death react positively to the Wassermann test, although apparently not syphilitic. We have not met with that difficulty in our asylum cases to anything like the same extent, though we have obtained a positive result in 8.3 per cent. of cases where a negative result was expected; on the other hand, we have obtained a negative where a positive result was expected. Our attention was first drawn to one of the factors responsible for the unreliability of the reaction in *post mortem* cases by noting that a serum which had at first given a completely negative result and which was being kept as a control became, after a short time, positive to the test. With this alteration in the reaction there had occurred some turbidity of the fluid and growth of micro-organisms. Similar results were found to occur in the case of a cerebro-spinal fluid.

This phenomenon was investigated more carefully by allowing serums and cerebro-spinal fluids, whose reactions to the Wassermann test had been recorded, to decompose at room temperature. We then found that anomalous reactions were frequently obtained; a positive reaction would become a negative and a negative tend to give a positive result. In the case of a perfectly clean and sterile inactivated serum or a cerebro-spinal fluid to which 0.5 per cent. phenol had been added, the reaction would remain unaltered even after the lapse of a considerable period. In one case of ruptured thoracic aneurysm the blood serum removed *post mortem* and inactivated was used periodically as a control for over three months, and at the end of that time showed the same power of complement deviation as when first obtained; and cerebro-spinal fluids from cases of general paralysis and other forms of insanity which were removed *post mortem* and carbolized five months ago are still in use as positive and negative controls.

In order to show that bacteria and their products can materially alter the reaction, we have lately taken known positive and negative cerebro-spinal fluids and inoculated them with laboratory strains of *Staphylococcus aureus*, *Bacillus coli communis*, and *Bacillus pyocyaneus*. At the end of twenty-four hours' incubation the test was again applied, and the strain of *Bacillus pyocyaneus* used was found to have caused a positive fluid to become negative, and a negative to have become positive.

These investigations are as yet quite incomplete, but taken in conjunction with the changes in reaction which have been observed in fluids which have been allowed to decompose, they suggest that certain varieties of saprophytic and pathogenic bacteria or their products may have the power of altering the reaction.

It is to the action of decomposition products that we attribute the anomalous reactions obtained with the cerebro-spinal fluids of Case F. and Case J. already referred to, for the cerebro spinal fluids of both these cases were turbid and full of bacteria when they were examined.

In Case M., however, we are inclined to attribute the failure to obtain a positive reaction to some changes set up

by the streptococcal infection of the meninges which had obviously occurred before death. The cerebro-spinal fluid of this patient had given a positive reaction before death. A known positive cerebro-spinal fluid was inoculated from a culture of this streptococcus, with the result that a considerable degree of haemolysis was obtained.

With regard to the serums giving positive reactions in cases that were not apparently specific, we would explain the anomalous reactions as the result of decomposition of the serum, for we have found that as soon as the serum commences to show any turbidity the reactions will tend to become positive. In some of these cases decomposition had obviously commenced even when the blood was removed from the body.

CONCLUSIONS.

While, therefore, our observations lead us to consider that the reactions on the blood and cerebro-spinal fluid removed from the cadaver before decomposition has commenced will give reliable results, we agree with Luksch that decomposition is liable to alter the reaction, as may also a terminal microbial infection. This change, however, is not confined to the alteration of a negative to a positive result, but may alter a positive into a negative; and we would point out that decomposition may similarly influence the result of the test on fluids and serums removed during life.

To ensure satisfactory results on *post-mortem* material it is, therefore, necessary to remove the cerebro-spinal fluid and blood as soon as possible after death. The serum should be separated and inactivated at once, and the cerebro-spinal fluid should be carbolized, unless the test can be applied the same day. The same remarks apply with regard to the preservation of material removed during life.

REFERENCES.

[1] *Verhandl. der deutsch. patholog. Gesellsch.*, 1910, xiv, p. 249. [2] *Lancet*, 1910, vol. ii, p. 204. [3] Ibid., November 11th, 1911. [4] *Proc. Roy. Soc. Med.*, July, 1910. For complete biography see *Syphilis from the Modern Standpoint*, McIntosh and Fildes (Arnold, 1911).

AN ACCURATE METHOD OF ESTIMATING THE VIBRATORY SENSE.

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EGGER in 1899 called attention to the sense of vibration felt when the foot of a vibrating tuning-fork is placed over subcutaneous bony points. The investigations of Bing showed that the sensation is probably conducted upwards in the posterior column of the white matter by fibres which do not decussate. In this country Williamson has shown that the vibratory sense is often lost when other forms of sensation are present. In peripheral neuritis, due to diphtheria, influenza, diabetes and alcohol, it may be lost at an early stage, and it may be an early sign in tabes.

The ordinary method of investigating the vibratory sense does not show the abnormal states which precede its complete or almost complete disappearance. In my investigations I have used the tuning-fork introduced and made by Edelmann of Munich for use in Schwabach's aural test for the absolute bone conduction of hearing. Its vibration frequency is 108.75 a second. Two pieces of steel are attached to the upper portion of the fork, arranged in such a manner that when the arms of the fork are vibrating a small window is seen between them; this disappears when the vibrations of the fork reach a definite amplitude. The moment that the window disappears I apply the fork to the subcutaneous bony point and start a stop-watch. The patient is instructed to give a signal at the moment when he ceases to appreciate the vibration; the watch is then stopped and the time recorded.

By this method on thirty normal individuals I found what period elapses before the sensation disappears at each bony point. The average periods, together with the maximum and minimum, are shown in the accompanying table. In the list there given it is noticeable that the average times over the sacrum and anterior superior spines are considerably less than the time for the other bony points. This is of interest, as Mott and others have found that the vibratory sense may be absent over the sacrum in cases of tabes when still present at the other bony points. This would follow a general depression of the sensation, since it is appreciated over these points less readily than in the other situations.

	Average.	Maximum.	Minimum.
	Seconds.	Seconds.	Seconds.
Internal malleolus	27	35	25
External malleolus	28	38	25
Tibia (middle of shaft, inner aspect)	29	37	25
Anterior superior spine ...	21	25	16
Sacrum	20	23	15
Sternum	30	36	24
Radius (lower end)	33	40	28
Ulna (lower end)	34	42	28

When this test is applied to patients suffering from impairment of the vibratory sensation a numerical ratio to the average normal is obtained which accurately represents the degree of impairment. I have used a graphic method to demonstrate these changes; the height in the accompanying curves represents the time during which the sensation was appreciated. Superimposed in most cases is a normal average curve for comparison.

CASE I.—*Diabetic Neuritis.*

Male, aged 54, suffering from diabetes. Pain and tenderness along the right sciatic nerve was the only evidence of neuritis, both tendo Achillis jerks being present. In spite of this the vibratory sense was one-half the normal over the tibia and external and internal malleoli of both sides, the right being only slightly more affected than the left.

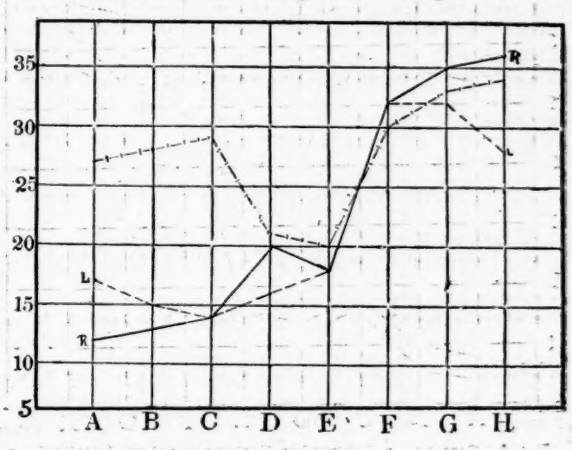

Fig. 1.—Case I. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — Average normal; ——— right side; — — — — left side.

CASE II.—*Plumbic Neuritis.*

Male, aged 32, suffering from lead poisoning. The right musculo-spiral nerve was markedly affected, the left very slightly.

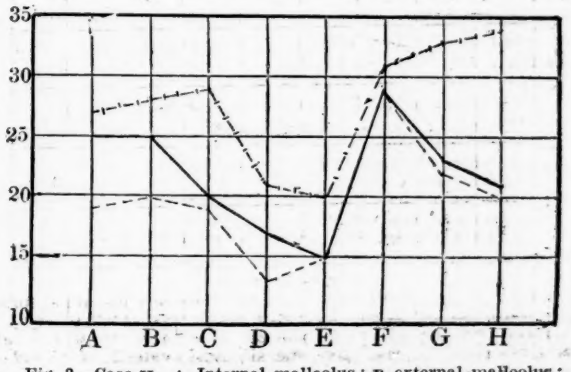

Fig. 2.—Case II. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — Average normal; ——— right side; — — — — left side.

The chart shows marked impairment over the radius and ulna of both arms, there being very little difference between the two sides. The legs are affected to a slight extent, although there was no other evidence that they were affected.

CASE III.—*Traumatic Ulnar Neuritis.*

Female, aged 34. The chart shows that her power of appreciating the vibrations was five-eighths of the normal over the right ulna.

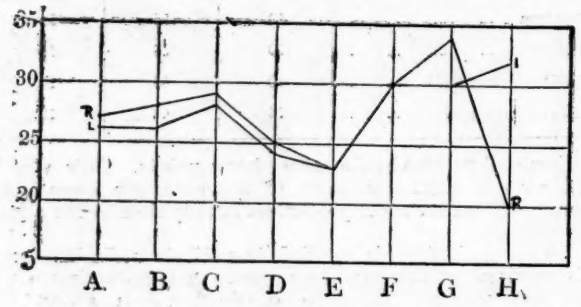

Fig. 3.—Case III. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum: F, sternum; G, radius; H, ulna.

CASE IV.—*Tabes.*

Male, aged 54, with the signs of a typical tabetic. The vibratory sense is markedly impaired from the sacrum downwards, while the sternum, radius, and ulna are approximately normal.

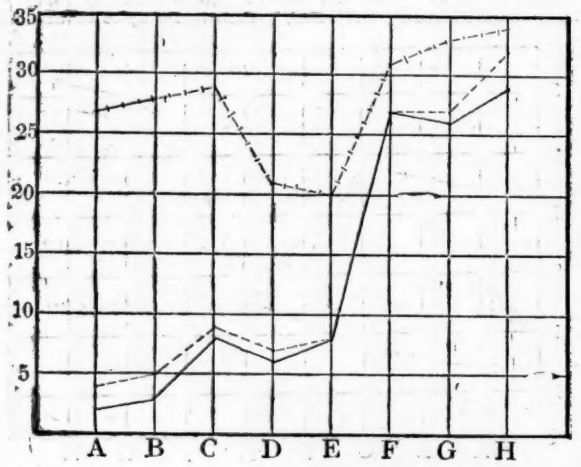

Fig. 4.—Case IV. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — | — Average normal; ——— right side; — — — — left side.

CASE V.—*Disseminated Sclerosis.*

The chart shows a lesion of a different type to that of the tabetic (Case IV). The impairment of the vibratory sensation is more disseminated, and involves chiefly the right arm and left leg, while the sacrum is normal.

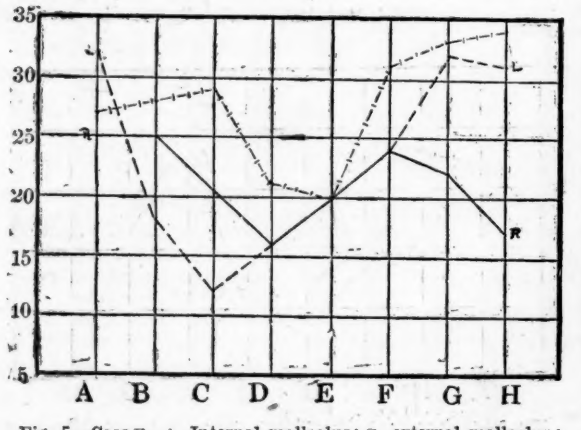

Fig. 5.—Case V. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — | — Average normal; ——— right side: — — — — left side.

CASE VI.—*Spinal Syphilis.*

Male, aged 28. The chart is of the same type as that of the case of disseminated sclerosis, but there is more marked involvement of the vibratory sensation.

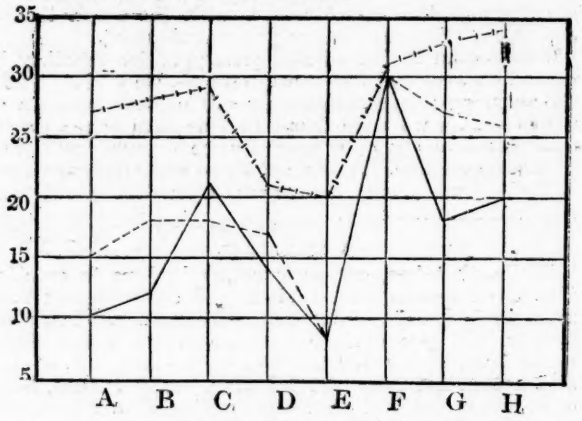

Fig. 6.—Case VI. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — | — Average normal; ——— right side; — — — — left side.

In this paper I have not attempted to discuss in detail the types of curves peculiar to any special disease of the central nervous system, but merely to describe a test by which slight impairment of the vibratory sensation can be recognized. Of its value in the early recognition of organic nervous disease and in the diagnosis between different diseases I hope to bring evidence in a later paper.

I wish to thank Dr. A. F. Hertz, Physician in Charge of the Neurological Department at Guy's Hospital, for his kindness in allowing me to examine the cases under his care.

THE CURATIVE VALUE OF LEISHMANIA CULTURE "VACCINE" IN ORIENTAL SORE.

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Preliminary Note.

THE chronic and obstinate nature of the Oriental sore in general and of the Cambay ulcer in particular is well recognized by all clinicians. The number of remedies and the variety of drugs which have been put forward from time to time as "specifics" for this disease, as also the scanty references on the treatment of this disease in text-books, may be taken as a fair index of the unsatisfactory nature of the therapeutics of this disease. In Cambay, the home of this disease on this side of India, all remedies, both internal and local, have lost repute to such an extent that people take the disease as one to which they have to submit as a matter of course (so long as their lot is cast in Cambay) until merciful Nature brings about a healing in her own time, this being, as a rule, anything between six to eighteen months, or even longer.

In these circumstances it has not been possible in Cambay to test the value of drastic measures (such as curetting of the lesions with sharp spoons and salting the surface so freshened with powdered potassium permanganate), as recommended by Nicolle[1] and Benoit Gonin.[2] Nor has it been possible to persuade patients in Cambay to submit to arsenobenzol injections for what is, after all, a benign malady. The only treatment which can be safely undertaken without the risk of scaring away the patients has until now consisted in the application of some non-irritating antiseptic oil or unguent. And of all these I may here record the efficacy of salol dissolved in olive oil. Salol dissolves easily in olive oil, over 1 drachm dissolving in 1 ounce of the oil. The oil, when rubbed into the skin, is well absorbed and it penetrates the tissues, and has probably some antagonistic action on the parasite without causing the least irritation. I have obtained very good results by applying the oil in the shape of a compress over the lesion before or after ulceration, and, except in those cases in which the ulcers have been already deep at the commencement of the treatment, the result is so satis-

No.	Date.	Name and Age.	Nature of Lesion.	Description of Lesions.	Duration.	Date and Dose of Vaccination.	Constitutional Disturbance.	Observation the Day after Vaccination and Week after Week.
1	Oct. 8, 1911	S. M., aged 20	Ulceration	Three ulcerating sores on both malleoli right foot and inner malleolus left foot. Ulcers covered with unhealthy granulations and foul discharge; margins well defined; base fixed; surrounding tissues congested; size, halfpenny	3 months	Oct. 8, 1911, 0.125 c.cm. Oct. 15, 1911, 0.25 c.cm.	Rise of temperature, 100° for 3 hours in the evening Nil	Patient showed signs of healthy granulation. Ulcers rapidly healed one week after second injection. Scars well defined after 3 weeks.
2	Oct. 11, 1911	R. P., aged 8	Papule	Early lesion; left cheek about the size of farthing, raised from surface; bright purple colour; surface covered with scales; induration of surrounding tissue fairly marked	2 months	Oct. 11, 1911, 0.125 c.cm.	Nil	Healed with hardly any scar. Spot made out after 4 weeks as a purple mark. Healing 2 weeks.
3	Oct. 13, 1911	N. K., aged 21	Papule	Raised from surface; covered with scales; margin not well defined; surrounding tissue indurated; base not fixed; size farthing, on the back left side.	20 days	Oct. 13, 1911, 0.125 c.cm. Oct. 19, 1911, 0.25 c.cm.	Nil Temperature 100.6° for 6 hours in the evening	Nil next day; 8 days after first injection shows signs of healing; size smaller. Ten days after second injection spot completely flush with skin; cured in 20 days.

factory that after the healing not a trace of the disease is left. The chief drawback in all the cases so treated has been the slow nature of the healing process, two to three months being the usual period during which the lesions have to be attended to carefully from day to day.

In a cutaneous inflammation of a low type such as is seen in Oriental sore the chronicity of the disease may find an explanation in the hypothesis that the parasites in the lesion flourish long, because they do not come into intimate contact with an antibody sufficient in quantity or efficient in quality in the blood serum supplying the part, just as Wright[3] and Leishman[4] have taught as taking place in acne. It is in such a disease as the Oriental sore, where one obtains as a rule a life immunity after one attack, that one would naturally appeal to a suitable specific "vaccine" with the hope of a beneficial result.

In this connexion it may be of interest to note the facts recorded by Nicolle[5] as to the immunity to a living virus conferred by a previous inoculation with a dead culture of the parasite of Oriental sore. Thus, of the two persons, one received, to begin with, an inoculation of a dead culture, a year later an injection with a live culture, and three months later still an infection with a live virus from the sore in a monkey, while the other underwent only the last two operations without the first. Of these two persons the first developed no lesion, while the other developed two lesions at the seat of injection with the live culture, and another lesion at the seat of infection with the live virus. I may also take this opportunity to record the protection conferred by kala-azar infection to infection by the Cambay sore parasite. Thus two cases of kala-azar under the care of Colonel C. Donovan, I.M.S., in Madras, were infected with the virus from the lesion in a monkey (original source human, from Cambay). Of these neither developed any sore, while as a control the virus was efficient to produce a typical sore in a fresh monkey infected at the same time. I desire to express my best thanks to Colonel Donovan for allowing me to do the infection and for observing the effects himself in 1910, and also for his kindness and courtesy ever since.

It is with the object of hastening the process of healing—in other words, of stimulating the mechanism of immunity production—that it was thought desirable to attempt to make a curative "vaccine," much on the same principle as Wright's staphylococcic vaccine in furunculosis. For this purpose massive cultures were obtained in Nicolle-Novy-McNeal medium from the *Leishmania tropica* from an experimental lesion in a *Macacus sinicus*, the original source of the virus being that from a Cambay case obtained early in 1910. When the cultures were at their best—namely, on the seventh day—the fluid, rich in flagellates, was collected and suitably sterilized with glycerine. This is the "vaccine" which has been tried by subcutaneous injection in 3 typical cases of Cambay sores of different ages with a tentative dose corresponding to 0.125 c.cm. of the original culture.

As this dose produced no constitutional or local reaction, a second injection of a double dose was given in 2 of the 3 cases. The rapid way in which the lesions (both ulcerating and non-ulcerating) healed (in about fifteen days) may be a justification for this short preliminary note. The results of these 3 cases are given in the accompanying table from the notes of Dr. Jamietram Vyas, of Cambay, who kindly undertook to treat the cases on the lines indicated above, and to whom I owe my best thanks. A bigger experiment is now in progress, and the results will be published at the earliest opportunity.

From the foregoing I may conclude:

1. 0.25 c.cm. of the "vaccine," and even more, can easily be borne by the patients.
2. There is hardly any constitutional disturbance beyond the rise of temperature sometimes, and that, too, not more than 100.6° for a few hours.
3. The only local effect (in the sore) noticed is a slight itching on the second day of treatment.
4. The healing is uninterrupted and rapid, and this may be roughly put down as about two weeks.
5. Non-ulcerating sores heal without any cicatrix or pigment, while the ulcerating sores leave behind a well-defined shallow depression of uniform depth.

Before concluding I may point out that an attempt is being made to extend the same principle of treatment in a case of kala-azar in Bombay—thanks to the kindness of Colonel C. H. L. Meyer, I.M.S.—from an auto-vaccine prepared out of the patient's own parasite, but with what ultimate result it is difficult to say at present. The result of this and other cases treated similarly will be published in due course.

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M. WŒSTE, leader of the Right in the Belgian Chamber, has introduced a bill supplementing Article 353 of the Penal Code, by punishing all doctors, midwives, or pharmacists, who recommend means of procuring abortion, with imprisonment for one to three years. Moreover, the bill imposes a penalty of imprisonment for six months to three years, together with a fine of from £8 to £120, on any one who either by speeches in public places, or by the sale, or offer for sale even in private, the exposition, advertisement or distribution of written or printed matter, or illustrations of means, instrumental or other, incites to action which may tend to produce abortion, whether such effect has actually followed or not.

WE learn from the *Berliner klinische Wochenschrift* that the number of medical women practising in Germany and of female students studying medicine in the universities has increased with surprising rapidity during the past few years. It was estimated that scarcely more than a round dozen women practitioners were following their profession in the Fatherland in 1900, most of whom had qualified in the Swiss universities. This number increased to 50 in 1908, and to over 100 in 1910. In the same way the number of women medical students at the German universities has increased. In the winter session of 1909–10 there were 371, in the summer session of 1910 525, and in the following winter session there were as many as 557. Berlin University claims 159 of the last-mentioned number.

A METHOD OF ENUCLEATION OF THE TONSILS.

By CHARLES W. M. HOPE, M.D., F.R.C.S.,
ASSISTANT SURGEON, THROAT HOSPITAL, GOLDEN SQUARE, W.

HAVING always been greatly interested in the removal of the palatine tonsil, I have during the last two years been perfecting a *modus operandi* which should have for its object the complete removal of the tonsil with its capsule; the technique of which should be essentially an open surgical dissection of the tonsil out of its bed, capable of being done rapidly and not exposing the patient to the prolonged and deep chloroform anaesthesia necessary in several methods already described.

By my method the tonsil is removed with the capsule intact, and the patient suffers from the minimum of shock. In hospital I use ethyl chloride always, but in private practice C E mixture.

The instruments necessary are two pairs of special forceps, a medium-sized guillotine, a Doyen's gag, and a tongue clip.

The forceps are shown in illustration. They are 8 in. long, and in shape like a pair of cleft palate forceps, but stouter in the blades. The ends are toothed. When open they can be used as tenaculum forceps to grasp the anterior pillar of the fauces, but when closed are used as blunt dissectors; the left hand pair is slightly curved on the flat for the last 1½ in.

The patient lies supine on a table of medium height, and towards the right side of it, without any pillow, and the head only slightly retracted. The anaesthetist stands at the head, and the operator on the right side facing the head. A Doyen's gag is placed between the incisor teeth closed. A good top light illumination is necessary; a head-light must otherwise be used.

When the patient is fully anaesthetized the gag is widely opened and the tongue fully drawn out of the mouth by means of a pair of tenaculum forceps held by an assistant. With the straight pair of forceps in the right hand the operator catches hold of the left anterior pillar of the fauces low down, and pulls it forwards and outwards away from the tonsil. The forceps in the left hand being closed and used as a dissector, a hole is torn with them through the mucous membrane lying between the tonsil and the portion of the anterior pillar held by the right hand forceps. The white pearly capsule at once comes into view lying just beneath the mucous membrane. This opening is deepened for about half an inch; and then, with a steady circular motion the dissecting (left hand) pair of forceps is swept up the front of the tonsil, across the upper pole, and down the posterior side of the tonsil, thus separating it from its anterior upper and posterior attachments. The mucous membrane of the pillars is found to split quite easily at the junction with the pharyngeal surface of the tonsil.

Leaving the left tonsil, the right anterior faucial pillar is now grasped low down with the left hand pair of forceps (previously used as a dissector), and the dissection made as before, with the right hand pair of forceps closed. The tonsils are now free, except on the outer surface and at the lower pole. The tongue may now be released, the forceps put aside, and the separation of the deep surface of the tonsils completed with the index finger. They will be found to strip down quite easily as far as the lingual prolongation, and will be hanging free in the pharynx, attached only by a narrow neck at the lower pole. The patient is turned on the right side to drain any blood out of the mouth, and the operation is completed by passing a medium sized guillotine over each tonsil and dividing the small pedicle at the lower end. I find the guillotine preferable to curved scissors. At first it may be a little difficult to find the tonsils and thread them through the guillotine, this portion of the operation having to be done by the sense of touch only, but practice soon makes it quite easy.

The whole operation on both tonsils and curetting of adenoids can be done in from forty to sixty seconds. The method is rapid, complete, and only one change of instruments is necessary from start to finish.

THE BLIND AND THE CENSUS OF 1911,

TOGETHER WITH STATISTICS AS TO THE CAUSE OF BLINDNESS.

BY
W. C. ROCKLIFFE, M.A., M.B.CANTAB., M.D.DUBL., M.R.C.S.ENG.,
HON. SECRETARY AND TREASURER AND OPHTHALMIC SURGEON TO THE HULL BLIND INSTITUTION; HON. CONSULTING SURGEON TO THE HULL ROYAL INFIRMARY; LATE VICE-PRESIDENT OF THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

UNDER the above heading the JOURNAL of November 4th last, reporting the annual meeting at Birmingham, and also *The Blind* of October, both contain an interesting paper by Mr. Bishop Harman, which at once raises a question, to which, for many years, I have been trying (in vain) from many sources to obtain an answer. This is: *When is a person to be considered blind?*—or, in other words, *What amount of defective vision should qualify an individual to be classified as blind?* and so entitle him or her to be not only included as blind in the census returns, but also eligible for one of the many blind charities entrusted to the various committees, to be expended for the "benefit of the blind." In every case the reply has been the same, "That they have no scientific definition of the term 'blind.'"

I therefore read with much pleasure Mr. Bishop Harman's paper, in which he states correctly that, "The census paper failed to obtain anything like a proper enumeration of persons who were *blind for the practical purposes of life.*" No one with any knowledge of the blind can take objection to this, especially as some of your readers may recollect, at the London Conference of the Blind, in 1902, in answer to my question to the Registrar-General as to when a person should be considered blind, I was told that he supposed a man was blind "When he could not see"; comment on this is unnecessary.

So far as the education of children is concerned, the Act has it plainly defined that "those who are unable to read the ordinary school type" must attend a blind school. For educational purposes this may, with or without a myope school, be accepted. But cases are within my knowledge of children at blind schools reading the paper to their schoolmates, and of others learning to read the sighted type (which, naturally, is not included in a blind school curriculum) after leaving school. With such cases (which were included in the census as blind) there can be no doubt that the census to be of any statistical value should divide those with imperfect sight into two classes:

1. Blind,
2. Defective vision,

as suggested to the Registrar-General by the deputation who waited upon him; and it is disappointing that he did not think fit to act on their and his own (or his predecessor's) suggestion (made at the 1902 Blind Conference) when compiling the census of 1911.

I have always held that those with defective vision should be divided into three classes:

1. *No perception of light.* These only, *ipso facto*, are "totally blind."

3. *Those able to read the ordinary test type*, namely, $\frac{6}{60}$—that is, can read at a distance of 20 ft. what a normally-sighted person can read at 200 ft.—are not blind.

2. *Includes the intermediate class*, and this is where the difficulty asserts itself. Again a subdivision must be made into—

A. Those who *can* differentiate—that is, count the upheld fingers—at varying distances, whom I classify as "partially blind."

B. Those who *cannot* differentiate, but can only see an object (for example, the hand) moving at varying distances from the face.

It is clear Class 1 is blind in every sense of the word, and Class 3 is *not* blind in the true meaning of the term.

Class 2 requires a further definition, and it was on this point that I solicited in my various letters the opinion of those who had funds, etc., placed at their disposal for the benefit of the blind. Alas! no one ventured an opinion, as above stated.

My personal definition of Class 2 has for many years been that those included under the above Section B should be considered blind, and of Section A (the partially blind) *only* those who *cannot* differentiate (that is, count fingers) at a greater distance than 3 ft. should be classified as "blind"; and I based my argument on the practical fact that a basket maker, ship-fender maker, cane chair seater, etc., who could do more than this, could distinguish his rods, strands, and canes, thereby placing his less fortunate fellow-workman at a considerable disadvantage, especially when a bonus at the end of the year was divided in proportion to the wages earned. In Hull we have found this definition most satisfactory, and one on which the "free tram rides" recently granted by our Corporation has been based, without any conflicting opinion; as a matter of fact, only six of the applicants for free tram rides could count fingers even at 3 ft., most having considerably more or less defective sight.

I had some conversation in London with my friend, Mr. Bishop Harman, on this point in May last, and whether our discussion had any weight with his views or no, I cannot say, but I note in his paper he also defines the blind "As those whose vision does not enable them to do more than distinguish fingers up to the distance of 1 metre." This, of course, is practically the same definition as my own.

Those who are classified as "partially blind" (and probably, if young, educated in a blind school) are certainly the class needing assistance at any time, and especially on leaving school, but with the above definition many are ineligible to participate in workshops and funds contributed for the blind. To meet this class, we in Hull admit them to our workshops as journeymen, and further include them in special entertainments, such as summer outings and Christmas distribution of gifts, and also occasionally give them clothing, etc., from our sick benefit branch, but they do not participate in our bonus on wages earned or the full benefits of our sick benefit, etc., branch. All, however (reading Braille, etc.), have the use of the library and our dining-room (where occasionally free dinners are provided), and I would suggest this to other towns as a means of assisting this class as well as of keeping an eye on their moral and spiritual welfare.

Further, I limit the amount of defective vision in those classified as partially blind to those who, although able to differentiate at a greater distance than 3 ft., yet are unable to see more than $\frac{6}{60}$—that is, I exclude from this class those who can see at 20 ft. what a normally-sighted person can readily define, with or without glasses, at 200 ft.

Bearing on this subject, I have it from the Registrar-General that the 1911 statistics of blind persons are not yet available, but that the 1901 census of the blind of the United Kingdom was returned at 32,823, of a population of 41,458,721, or 1.263 per 1,000, and that of Hull as 214 blind in a population of 240,259, or 1.122 per 1,000.

We believe the Hull Blind Institution includes every really blind person in every sphere of life, and the numbers on our list in 1901 was 189, so that with my above definition of when a person ought to be classified as blind, probably 25, or about 10 per cent., of the 214 returned in the census of 1911, should really have been classified as "defective vision" or partially blind. If this is correct, it would reduce the actual number of blind in the United Kingdom in 1901 from 32,823 to 29,543 or thereabouts.

During the twenty-eight years I have been intimately connected with the Hull Blind Institution there have been enrolled on our list 590 persons unable to count fingers (that is, to differentiate) at a greater distance than 3 ft., every one of whom I have personally known and examined, so that the following figures may be taken as fairly accurate and of interest as bearing on this subject.

Of these 590 of all ages (from 4 days to 96 years), 331 were males and 259 females=590.

The cause of blindness included—

Atrophy of the optic nerve	160
Ophthalmia neonatorum	91
Glaucoma	62
Irido-choroiditis (under which term I include general disease of the tunica vasculosa)	60
Sympathetic ophthalmia	37
Leucoma—	
Inflammatory	32
Traumatic	2
Congenital	2—36
Shrunken globe	31
Detached retina	18
Retinitis pigmentosa	12
Congenital cataract	3
Microphthalmos	3
Purulent ophthalmia in the adult	2
Pyaemic panophthalmos	2
Congenital amaurosis	2
Kerato-malacia	1
	540
Cause unentered	50
Total	590

During the Decades.	Number became Blind. From all Causes.	Number became Blind. From Complete Atrophy of Optic Nerve.
Age 1 to 10	115	10
,, 10 to 20	42	9
,, 20 to 30	47	16
,, 30 to 40	62	36
,, 40 to 50	85	51
,, 50 to 60	57	22
,, 60 to 70	73	13
70 upwards	47	3
Date unentered	62	—
Total	590	160

I believe ophthalmia neonatorum is generally considered to be the primary cause of blindness. Doubtless in years gone by this was so, but from my above figures it is clear to-day atrophy of the optic nerve ranks first, and much clearly has yet to be discovered in the preventive and therapeutic treatment of these cases. Further, atrophy occurs in the middle decades of life, especially between the ages of 40 and 50, and another point of interest is that death usually follows spinal atrophy in four or five years, while those with cerebral atrophy live to a much longer period, as the following chart shows:

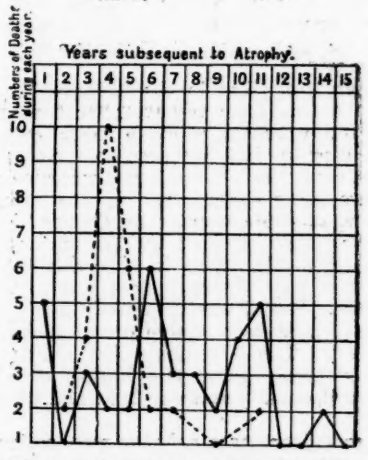


Chart showing number of deaths in the various years following complete cerebral and spinal atrophy of the optic nerve. Of the 10 cases of atrophy occurring during the first decade, which include 3 imbeciles, all died under 10 years. Black line=cerebral atrophy; dotted line=spinal atrophy.

Of the 160 on our books blind from atrophy—

In 1884 there were	37
Added between 1884 and 1894	20
Added between 1894 and 1904	90
Added between 1904 and December, 1911	13

Whether this decrease in numbers during the last seven years is due to recent advanced cerebral surgery I would not say, but it certainly gives the impression that it is not unlikely.

Of the 115 blind afflicted during the first decade of life—

Ophthalmia neonatorum	was the cause in		...	91
Atrophy of the optic nerve	,,	,,	...	10
Sympathetic ophthalmia	,,	,,	...	3
Congenital cataract	,,	,,	...	3
Microphthalmos	,,	,,	...	3
Congenital amaurosis	,,	,,	...	2
Congenital leucoma	,,	,,	...	2
Kerato-malacia	,,	,,	...	1

Of the 91 ophthalmia neonatorum, the blind on the Hull Blind Institution books—

Numbered in 1884	...	...	...	53
Enrolled between 1884 and 1894	...	...	...	20
Enrolled between 1894 and 1904	...	...	...	16
Enrolled between 1904 to December, 1911			..	2
				91

This very satisfactory and steady decrease is undoubtedly due to the information circulated as to prevention.

Of the 37 blind from sympathetic ophthalmia—

From 1884 to 1894...	... ...	23 were on the books.
From 1894 to 1904...	... ...	10 were enrolled.
From 1904 to December, 1911 ...		4 were enrolled.
		37

This decrease undoubtedly is due to the advances in ophthalmic knowledge and treatment.

Of the 82 blind from glaucoma—

From 1884 to 1894...	... ...	44 were on the books.
From 1894 to 1904...	... ...	20 were enrolled.
From 1904 to December, 1911 ...		18 were enrolled.
		82

These figures are most unsatisfactory, as proving that the treatment of glaucoma is not yet perfect.

In conclusion, I would hope that any of your readers who are in a position to give reliable statistics, based on the above lines, will endeavour to do so, and if they will communicate with me, stating the number of the blind at their disposal, I shall be pleased to forward sufficient printed forms to fill in, for the necessary analysis, and at a future time publish the results.

THE CASUALTIES IN TIBET.

BY

R. F. D. MACGREGOR, LIEUTENANT, I.M.S.,

GYANTSE, TIBET.

A SHORT account of some of the wounded who, after the recent fighting between Chinese and Tibetans, came under my care in the Civil Hospital, Gyantse, may prove of interest.

Most fighting took place in the Shigatse Valley, some considerable distance from Gyantse; for this reason the majority of the wounded went to their own villages instead of walking the long distance to the Gyantse Hospital for treatment. In all, seventeen wounded came for treatment, five being Chinese and twelve Tibetans. It was noticed that, while wounds by Chinese bullets did well as a rule, those inflicted by Tibetan bullets were almost invariably septic. This is to be attributed to the lower velocity of the Tibetan bullets, and to their great variety in shape. Sword wounds were in many cases very serious. The Chinese were equipped with Mauser rifles of modern pattern. The Tibetans relied chiefly on their muzzle-loading prong guns, the bullets of which are roughly spherical, usually made of lead and of about 500 bore.

Out of the seventeen cases, only ten were serious enough to merit description, four Chinese and the remainder Tibetans.

CASE I.—M., Chinese male. Bullet wound left side of neck. The wound must have been inflicted by an irregularly-shaped bullet travelling with low velocity. The tissues between the wounds of entrance and exit had sloughed away, leaving a lacerated cavity from which much pus was oozing. The lower part of this patient's face was considerably swollen. The wound, though very septic, ultimately did well.

CASE II.—W., Chinese male. Bullet wound right knee. The bullet entered at the inner side of knee, slightly tearing the semimembranosus tendon, and emerged on the inner side of the patella, forming a sinus about 5 in. long. No important structures had been injured, but healing was very slow.

CASE III.—P. T., Tibetan male. Bullet wound left knee. This was a very bad case. Practically all the tissues on the inner side of the knee had been shot away. The wound was very foul and in part gangrenous, while a considerable amount of pus escaped from the joint and the thigh muscles. His only chance was amputation, but this he refused, so treatment was confined to general cleaning of the wound and clipping away of the affected tissues. He was greatly run down, but, refusing to stay in hospital, went home. This patient can have very little chance of recovery.

CASE IV.—L., Tibetan female. Sword wounds head and hand. The head wound in this case commenced at the upper border of the right eyelid, which was divided, and extended downwards and to the left to the inner canthus of the left eye, dividing *en route* the nasal bone just below its junction with the frontal. In addition, she had other smaller scalp wounds and a badly lacerated hand. All the wounds were septic and it was undoubtedly a very bad case, but she made a good recovery. One finger had to be amputated.

CASE V.—M., Chinese male. Sword wound head and hand. The largest wound extended from the root of the nose upwards for about 6 in., exposing the skull. There was also a deep punctured wound above the right ear. Both these wounds suppurated, as also did his right hand, which showed a ragged wound on the dorsum of the index and middle fingers. Owing to the fact that the edges of the largest wound were undermined the wound was difficult to keep properly clean; healing was slow.

CASE VI.—P., Tibetan female. In this case there were two long, deep wounds of the scalp, one running upwards and outwards from above the left eye, the other on the top of the skull. The edges here were also undermined—almost "sliced," one might say. She made a good recovery.

CASE VII.—S., Tibetan male. Bullet wound back and arm. The bullet entered the back at the level of the angle of the fourth and fifth ribs. The wound of exit was situated in the anterior axillary line at the level of the eighth rib. The bullet then passed through the inner aspect of the upper arm 4 in. above the condyles, the wound of exit being on the anterior aspect of the upper of the same level as the wound of entrance. The biceps muscle was much torn, and there was considerable haemorrhage. As a large amount of pus was escaping from the wounds in the back I slit up the track of the bullet and found that the fourth and fifth ribs at their angles were comminuted. On the fragments being removed the wounds healed rapidly. The patient is still under treatment, as he has very little power in his arm.

CASE VIII.—P. G., Tibetan male. Bullet wound thigh. The bullet passed from above slightly downwards, entering the outer aspect of the thigh at the junction of its lower and middle thirds and emerging on the front of the thigh. Although the wound was a deep one no important structures were damaged, and once the wound became clean it healed fairly quickly.

CASE IX.—J., Tibetan male. Bullet wound of left knee, sword wound of the head. The wound on the front of the left knee was a large lacerated one, destroying the surrounding tendons and causing great swelling of the joint. It was a very similar wound to that mentioned in Case III. Pus was escaping from the joint. The sword wound of the head was very deep; the skull was fractured, and through the fissure a little pus could be seen. The patient died of septic meningitis.

CASE X.—C., Chinese male. Bullet wound right arm. This was the most interesting case of all. The patient was wounded beyond Shegatse, and although in great pain had walked to Gyantse for treatment, a four days' journey. The bullet grazed the right side of the chest and entered the inner aspect of the upper arm, 2 in. below the level of the great tuberosity. No wound of exit could be seen. As pus was escaping from the large ragged wound, it was evident that something was keeping up the discharge. Under chloroform an incision was made downwards from the lower end of the wound, and, after considerable hunting, a bullet was found lying very deep down, somewhat behind the humerus. The upper end of the bone was comminuted, the bullet, a round leaden one about the size of a small marble, showing a ragged projection where it had struck the bone. The patient is still under treatment, and is doing well.

DR. WILLIAM JOSEPH ESSERY, of Southsea, has been appointed a Commander of the Royal Victorian Order.

IT would appear from the annual report of the Yarrow Home for Convalescent Children at Broadstairs that its utility during the winter months as well as other seasons of the year is being increasingly appreciated, for on December 31st there were as many as 83 children on the books. It would appear also that the committee is now working more closely in accordance with the original intention of the founder, and therefore admitting only children whose parents can be considered as belonging to the professional or educated classes but whose means are very limited. The London address of the home is 6, Holborn Viaduct, E.C. Its full title is the Yarrow Home for Convalescent Children of the Better Class, and it is fully endowed.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE MIMICRY OF PHTHISIS BY HYSTERIA.

IN view of the publicity accorded by the daily press to the illness of a certain young woman and her recovery, which has been called miraculous, it may be interesting to your readers if I furnish a short account of her nine months' stay in this sanatorium.

She was admitted on May 22nd, 1906, her age being 16 years, and her weight 7 st. She remained until January 1907, when she was discharged "in excellent health." The diagnosis made on admission was: "Hysteria; hysterical vomiting; haematemesis, vicarious in origin." There was no question at any time of her being tuberculous. She spent another three weeks here in January, 1908, by invitation of the sister in charge, during which time she was very active and cheerful, taking part in private theatricals got up for the benefit of the patients. At this visit also her lungs appeared perfectly healthy. Her subsequent history would appear to be one of relapse from her previous disease. It is, of course, well established that paralysis of pretty well every sort, complete blindness, deafness, mutism, vomiting, cough, bleeding (often profuse), from any mucous, surface may each and all be due to hysteria, and to this alone; and the interesting question remains as to the physical signs in her lungs.

I would point out that in this latter disease a harsh vesicular expiratory murmur; a broken-up, wavy inspiratory, and even expiratory, murmur; limitation of movement, increased vocal fremitus, impaired resonance, and increased voice sounds are all to be met with and to be taken at their true value. I have at the present moment under my care a young woman whose temperature has frequently reached 110°, and whose disease is hysteria, and, I believe, that only. That to call a diseased state by this name may easily be a cover for ignorance or an excuse for superficiality I am well aware, but I am convinced that in this girl's case an excellent opportunity is afforded for the study of this disease in the variations of its physical signs, the multiplicity of its symptoms, and the suddenness and completeness of its resolution.

E. G. MARCH,
Reading. Honorary Medical Officer, Box Grove Sanatorium.

I THOUGHT it might interest you to hear from one of the "twenty doctors" who are reported to have attended the "miracle case." I attended her for about six months in 1908, and paid special attention to her case. The details, which I well recollect, may be of interest. I was called to see her, and found her up and dressed. She complained mainly of pain after food, and vomiting, with general weakness. She gave a history of having been treated for pulmonary consumption in a home at Reading, where they gave her fresh air and a forced meat diet, sometimes "raw." I found her very pale, quite colourless in fact, inclined to be thin, but not wasted. The lungs showed no evidence of disease at all, and the heart was healthy. She had no cough and no evening rise of temperature all the time I was attending her, with the exception of one short spell lasting a few days. Nothing abnormal could be seen or felt in the abdomen. She complained of acute tenderness on pressure over the epigastrium, much less acute, but still present, when her attention was engaged elsewhere. Her mother told me she vomited everything, and at times brought up large quantities of blood.

As she was then taking ordinary food I ordered her to bed on a milk and barley-water diet. For a time the vomiting ceased. After a few weeks she complained that she could not continue the milk, and started being sick sometimes. On several occasions I was informed that she had brought up a pint of red blood, but was never fortunate enough to see it myself. When I insisted on everything being kept for my inspection I was shown, two or three times, a little blood-flecked vomit. She appeared to have no coffee-grounds vomiting, nor any melaena.

Peptonized milk made no difference, so I got a nurse to give rectal feeds twice a day. The patient strongly objected, but after persisting ten days or so she was able to take milk again without it causing vomiting. However, she now began to have violent attacks of pain, usually about 7 p.m. I was sent for many times, usually to find the attack over, and to be told by the patient that she was dying, and that she would be glad to die. I am able to state that at this time there was neither sugar, blood, nor albumen in her urine.

She was always very patient, complained not at all, and appeared to be quite resigned. She seemed to have no hope of recovering. She preferred to lie still with the blinds half drawn, and with her eyes half closed. I considered that she might at one time have shown signs of consumption, that the forced feeding with meat had impaired her digestion, and possibly caused some gastric ulceration. Although called many times, and urgently, because they said she was dying, I never found in her any cause for immediate anxiety, and was, I think, rather blamed by her mother because I insisted on keeping to that opinion. Her pulse, under me, never rose above 100, and was usually under 80. There was never any dimness of vision or deafness.

Of course, much may have happened since 1908, but at that time I am certain she had neither consumption nor diabetes, for I overhauled her many times and thoroughly, being rather puzzled to account for her condition, and being always a little sceptical about the correctness of my own diagnosis of gastric ulcer.

Retford. F. NORMAN HITCHCOCK.

ON THE CARE OF A CASE OF MEASLES.

Now that we seem to be at the beginning of an epidemic of measles, I would draw attention to the importance of special care of the nose and throat in the treatment of that complaint. It has been pointed out by many observers, and is, indeed, a matter of common knowledge, that in this as in other of the acute specific fevers the secretions from the nose and throat are not only profuse but highly septic; and hence it is not unreasonable to infer that many of the complications, especially purulent otitis, bronchitis, and bronchopneumonia, are induced by the direct action of noxious organisms so introduced into the system. The infective principle can be readily absorbed through the tonsils, and the mucus itself, with all that it contains, may be conducted through the Eustachian tube into the tympanum, or drawn downwards into the air passages of the lungs by the ordinary movement of inspiration. Moreover, the entrance of the same tainted secretion into the alimentary canal—for it is invariably swallowed in large quantities—tends to set up poisonous decompositions in the stomach and bowels. Much local disturbance may be excited by this means, and the absorption into the blood stream of the products of this unhealthy fermentation may be the cause of widespread mischief.

It is more than probable that most, if not all, of the inflammatory complications of measles owe their origin to this septic material acting either locally or through the general circulation. I believe that by attention to this matter, not only would the illness be made to run a shorter and more favourable course, but the occurrence of the more serious consequences, such as purulent otitis and meningitis, disseminated myelitis and multiple neuritis, pneumonia, and enteritis, not to speak of the various eye complications, might be made unlikely, if not impossible.

The belief is now widely held that it is to the tonsils and naso-pharynx that we must look for the channel through which infection is conveyed to the general system in a variety of diseases. There can be little doubt that the naso-pharyngeal mucous membrane is not only especially open to an invasion of virulent organisms, but is also the least capable of resisting their attacks. From careful observation extending over many months I have come to realize that in early life a post-nasal catarrh can be readily excited, and, as it does not necessarily give rise to local symptoms, may persist for weeks or months together, quite unsuspected, and be only discovered when the whole body is submitted to systematic examination. Of itself the derangement has little tendency to subside; and a mucous membrane which is already in a state of catarrh—that is, in a state which renders it readily receptive of microbic infection—has poor defensive power and is certain to be profoundly contaminated by the virus.

Some time ago I was asked to attend a case of measles.

The illness had occurred in a boy of 12 years of age whom I had known from his birth and during his visits to town had been often consulted about. The patient, an anaemic subject, had suffered from many attacks of bronchitis which had necessitated strict confinement to his bed, and had also been treated by myself on other occasions for post-nasal catarrh accompanied by violent and distressing cough. The epidemic of measles had broken out at his school, and many of the boys had been seriously ill with the disease and its complications. On account of the known susceptibility of his lungs I looked upon the patient as a bad subject for measles, and was accordingly impressed with the extreme importance of taking every possible step to prevent the further entrance of morbific organisms by way of the nose and throat. The pharyngeal mucous membrane showed the usual condition in measles; the membrane was red and swollen; the tonsils were congested and red, and thick muco-purulent secretion could be seen on the posterior wall. Local treatment of the naso-pharynx was begun without loss of time. Glycerine of boric acid was applied thoroughly to the throat with a brush three times a day, and an antiseptic spray containing 10 grains of resorcin to 1 oz. of normal saline was used to the nostrils every few hours, while the boy inhaled deeply so as to draw the atomized fluid completely through the nasal passages into his pharynx and trachea. The patient had already begun to cough, but under this treatment the laryngeal irritation never became distressing and very quickly subsided. There was never any sign of catarrh of the air passages of his lungs except that on one visit—the second day of the rash—I detected a few moist clicks at one spot just below the inferior angle of the left scapula; but these quickly passed away and were never renewed. The pharyngeal catarrh also quickly came to an end, and the boy was soon convalescent. The temperature throughout was that of an ordinary attack of measles.

The favourable progress of this case was a great and welcome surprise to the parents, who assured me that they had never before known their son to begin to cough as he had done without his suffering from a severe bout of bronchitis. I cannot help believing that his immunity on this occasion, when all the conditions pointed to an attack of bronchitis of exceptional severity, was due entirely to the attention paid to the nose and throat; and it is only as an inducement to others to adopt the same line of treatment, and not for any special interest in itself, that I have ventured to place this case upon record.

London, W. EUSTACE SMITH, M.D.

AN EPIDEMIC OF MEASLES.

THE village of Hanwell, Oxfordshire, is now having what is almost a unique experience in these days of intercommunication. After a period variously estimated at twenty-seven to forty years since measles last was prevalent here, an epidemic has broken out, and the effects are remarkable. Men, women, and children have been attacked, and in some cases with considerable severity; more than 25 per cent. of the population have been *hors de combat*. The disease was introduced by a youth of 18 who works in Banbury, three miles away, and very quickly spread. The number of adults and adolescents is remarkable; in one house the father, aged 45, two sons, aged 18 and 17, and four younger children have contracted the disease. Among adults the temperature appears to run rather high; one married woman developed 105.2°, and in her brother, aged 25, the temperature reached 104.5°. Up to the present time there have been about 50 cases in a population of 170.

Hanwell, Banbury. WM. MILLIGAN.

THE *Times* announces that the Indian Budget, introduced into the Viceroy's Council on March 1st, provides for the expenditure of £333,000 on provincial sanitation, £40,000 on the Central Hygiene Research Institute, and £33,000 on the School of Tropical Medicine in Calcutta. A sum of £172,000 is allocated to the Madras City waterworks. Sir Guy Fleetwood Wilson, in introducing the budget, stated that the Viceroy (Lord Hardinge), in his first discussion of the subject of finance, had said that his desire was that the improvement of sanitation and the diffusion of education should be the features of his viceroyalty.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

GIBRALTAR BRANCH.

AT a meeting held on September 4th, 1911, Fleet Surgeon O. W. ANDREWS read a paper on Salvarsan in the Treatment of Syphilis. After some introductory remarks, he said his experience was limited to 21 injections administered to 19 different individuals; in only one of those cases had there been any return of the symptoms, and that case was now under treatment for aphonia, attributed to syphilitic laryngitis, and the patient positively refused to undergo further treatment with salvarsan on account of an alleged death which was reported in a lay paper, and which was supposed to have occurred whilst the patient was under treatment by this remedy. The cases treated on board the *Bacchante* were as far as possible taken from amongst those which had proved refractory to mercurial treatment, but in several cases salvarsan was administered to men known to have suffered from syphilis, who wished to undergo the treatment in order that they might enjoy peace of mind by undergoing what Ehrlich described as the "therapia sterilisans magna."

It would seem that the action of salvarsan was largely due to the production of antibodies, which in turn killed those treponemas which had survived the direct action of the drug. That this was in all probability the correct explanation of the action was shown by the following facts:

1. It was reasonable to suppose there were fewer treponemas in an early than in an advanced one, and it was found in that practice a larger dose was required at the beginning than in the later stages; in other words, the dose should be inversely proportional to the severity of the case.

2. If a nursing mother the subject of syphilis, who had a syphilitic infant at the breast, were injected with salvarsan, her milk had a direct curative action on the infant, and this action was attributable to the antitoxin produced in the mother by the death of the treponemas within her blood. Later he would give a case from actual experience which illustrated this action.

3. The great danger in the use of salvarsan in debilitated subjects or in very young children was that they were more liable to be poisoned by the endotoxin set free through the death of the organisms within the body than by the arsenic contained in the preparation.

4. That the action of salvarsan depended on the production of an antitoxin was shown: (*a*) By the fact that it was useless to inject salvarsan as a *prophylactic* against syphilis; it could not act unless there were spirochaetes for it to destroy. (*b*) If serum were taken from a blister produced on a patient suffering from syphilis and who had been treated with salvarsan, this serum had a distinctly curative action on syphilitic affections.

Prior to the introduction of salvarsan, atoxyl was extensively tried as a remedy against syphilis, and was abandoned because its action depended upon a reduction product called para-aminophenylarsenoxyd which was formed, and arsenic was set free; in certain individuals peculiarly sensitive to arsenic optic troubles might arise. That objection did not obtain with salvarsan, but great care was at first exercised in selection of cases, so as to eliminate all those cases showing signs of optic neuritis. As an illustration of the antitoxic action on a syphilitic infant of the milk of a syphilitic mother treated with salvarsan he quoted a case published by Duhot in August, 1910:

A woman, aged 22, suffering from syphilitic roseola in March, 1908, was treated by intramuscular injections of mercurial cream, which were badly borne, then by inunctions of mercury and potassium iodide given by the mouth; she got gradually thinner, and in December, 1909, when already pregnant, only weighed 45 kilos (just over 7 st.). The previous month (November) she had begun to show lupoid syphilitic ulceration in the parotid region, which only yielded to very strong specific treatment and local applications of $AgNO_3$ which left large cheloid scars. These had scarcely healed when others broke out, and so the case went on and ended up by invading the forehead, root

of the nose, and parts around the left eye. On July 4th, 1910, the woman was delivered of a full-term child weighing 2 kilos 900 grams (6.3 lb.) the face of which had the wrinkled, wizened, aged appearance so typical of hereditary syphilis. The infant took the breast badly, cried little and with a very weak voice, and a few days after birth showed a papular rash all over the body, large red papules, and the bullae of erythematous pemphigus on the soles of the feet. Up to July 25th it had only gained 100 grams (that is, 3½ oz.). On this day, as the mother's lesions were getting worse and worse, she was given 50 cg. of salvarsan, and the next day she received a further dose of 45 cg. Twelve days later the lesions had healed completely. From July 28th, that is, three days after the first injection, the child had assumed a perfectly normal appearance. The cutaneous symptoms and the nasal catarrh had completely disappeared, and the infant in three weeks had put on 1,200 grams (that is, 42.3 oz.). The child remained somewhat hydrocephalic. The analysis of the mother's milk did not reveal a trace of arsenic.

The only conclusion, then, that could be drawn from that case was that the mother's milk contained some substances preventing infection and destroying a sufficient number of treponemas to bring about a disappearance of the symptoms. M. Duhot said he intended injecting into this infant from 8 to 10 mg. per kilo of the infant's body weight as soon as its general health allowed of this being done. Some years ago Behring proposed to rear a number of calves which had undergone a process of immunization against tuberculosis on somewhat similar lines to those on which this infant became cured. Fleet Surgeon Andrews had already alluded to a remarkable feature of salvarsan, namely, the rapidity with which it acted. Ehrlich himself recorded a case where a man who was under his care had an attack of syphilitic tonsillitis so bad that he could not swallow anything, and yet who was able to enjoy a roll of bread five hours after receiving an injection of salvarsan. The effect was equally rapid where the bones were affected.

Michaelis quoted a case occurring in a small infant covered not only on the greater part of the face, but also on the limbs, hands, and feet, with a papulo-squamous syphilide, and which, after receiving 0.06 cg. of salvarsan in three days was almost entirely free from skin eruption.

In Fleet Surgeon Andrews's own experience, he had had several cases where there were mucous patches in the mouth, superficial glossitis, all of which lesions were completely healed within a week of an injection of salvarsan.

Although the majority of syphilologists were very much in favour of salvarsan, it could not be denied that there were a few whose opinion carried weight who were opposed to it. Whilst these last were quite willing to admit that it acted much more rapidly than mercury, and in many cases appeared to effect a cure, they would not admit that it had displaced mercury in the treatment of syphilis. Sir Jonathan Hutchinson was sceptical regarding the alleged freedom from danger which Ehrlich claimed for salvarsan, as regards partial or complete blindness, such as had followed in certain cases the use of soamin, arsacetin, and other arsenical preparations, though this freedom from risk of optic troubles was one of the points on which Ehrlich himself was particularly emphatic.

Mr. Ernest Lane was opposed to its use. Dr. Sequeira, reporting in December, 1910, on 34 cases of syphilis treated by salvarsan, said that there had been no symptoms giving rise to anxiety, and in all cases he had seen great improvement as a result of its use. Mr. Campbell Williams described the immediate results of the remedy in inveterate syphilis as nothing short of "magical" when one saw its effect upon cases of a tertiary type which had for years resisted the orthodox mercurial or iodide treatment. Although Mr. Campbell Williams was very enthusiastic in regard to salvarsan, he particularly warned practitioners to pick their cases, and avoid giving it in aged or debilitated subjects, and in all cases he said an examination of the retinae should be made. As was so often the case when a remedy of this sort had been discovered, certain people imagined that they had discovered a panacea. Fleet Surgeon Andrews said he had made notes from the medical papers of cases reported as having been benefited by salvarsan. Although it was first and foremost a remedy against parasitic diseases such as syphilis or relapsing spirillar fever, there were, no doubt, many quite dissimilar diseases capable of being benefited by its use.

For example, Von Bokay had found that chorea was rapidly cured by it—a thing which would not surprise anyone who had seen the good effects of Fowler's solution in that disease. Vincent's angina, which was a spirillar disease, had recently been treated successfully by salvarsan. Sicard had also recently employed it in cases of tabes, but he had been very careful only to employ intravenous injections, and had given it in doses of 30 cg. for a man and 20 cg. for a woman—that was to say, in doses only equal to one-third of what one gave in ordinary cases of syphilis—each injection being limited to 150 to 200 c.cm of physiological saline solution. The injections in tabes should be made in a series of five or six injections, each one separated from the preceding one by an interval of about ten days. Those syphilitic subjects suffering from tabes reacted best to salvarsan who showed an abundant lymphocytosis of the cerebro-spinal fluid. Patients suffering from general paralysis of the insane were not benefited.

Czerny and Caan had advantageously employed this remedy in cases of malignant tumours under their care at the Cancer Institute at Heidelberg. Cases of cancer considered inoperable had given encouraging results, except in cases of cancer of the floor of the mouth. In the case of cancer of the tongue, even after forty-eight hours, a notable reduction was observed in the size of the tumour. Sarcomatous growths were those *par excellence* which were benefited by salvarsan. Czerny and Caan, as the result of numerous experiments, were of opinion that salvarsan was capable of exercising a certain elective action on the cells of neoplasms, an action especially marked when simultaneously with a subcutaneous, or still better intravenous, injection, part of the dose (say 20 cg.) was injected directly into the tumour, the rest of the dose selected being given either into the gluteal region or intravenously. They gave from 40 to 60 cg. in these cases, and according to the extent and progress of the lesions under treatment repeated the dose. The remedy had been employed successfully in epilepsy by Bogrov, a Russian surgeon. In one case reported by him the fits from being of daily occurrence were rapidly reduced to one in three or four days, and later still further reduced.

Contra-indications.—Fleet Surgeon Andrews went on to say that in a paper dated August 30th, 1911, he read of 5 cases of pernicious anaemia treated by M. C. Leede, 4 of which died in from thirty-six hours to fourteen days. In these cases the injections were undertaken as a last resource; but it was regrettable that the remedy should have been tried in cases of this sort, as there were always people who were ready to attribute death to the remedy and not to the disease. In none of these cases was there a suspicion of syphilis. In several recent cases Luksch had employed salvarsan in the treatment of acute infectious diseases. He had remarked that salvarsan had an inhibitory action on certain micro-organisms, such as the meningococcus, the *Diplococcus lanceolatus*, *Staphylococcus pyogenes*, etc., and that he was able to save the lives of rabbits inoculated with these organisms by a subsequent intravenous injection of salvarsan. He was accordingly led to try the remedy in a case of osteomyelitis of the femur which was *in extremis*. Although a great improvement resulted from the use of this remedy the patient ultimately succumbed. In three cases of purulent cellulitis an injection of 30 cg. of salvarsan gave excellent results, ending in a fall of temperature by lysis and complete restoration of function in the affected limbs.

Framboesia, which, as every one knew, was now thought to be a modified form of syphilis, had proved very amenable to salvarsan, cases having been recently treated with success with it in the West Indies.

Martindale and Westcott had summarized the contra-indications for the use of salvarsan as follows:

(*a*) Severe non-syphilitic retinal and optic diseases; (*b*) severe heart and vascular diseases; (*c*) severe lung affections; (*d*) severe non-syphilitic kidney affections; (*e*) advanced degenerative processes of central nervous system; (*f*) angina pectoris and fevers. Patients who have had one or two attacks of hemiplegia, advanced cases of tabes, or general paralysis of the insane, should never be given an injection. Marked arteriosclerosis and Bright's disease were contraindications.

The Wassermann reaction, according to some, was only removed in 10 per cent. of cases. In conclusion, Fleet Surgeon Andrewes quoted as an instance of complete cure a case of true syphilis which was treated with salvarsan and weeks later contracted a true Hunterian sore.

As regards the method of injection, there were at their disposal three methods: (*a*) intravenous, (*b*) subcutaneous, (*c*) intramuscular. The intravenous method required a good deal of skill, and in experienced hands was painless and safe. The subcutaneous method was simple and effective; it was usually carried out in a situation midway between the spine and the lower end of the scapula. Neutral suspension was employed for the subcutaneous method. Injections were also made in the chest; for men, the site selected was a fold of tissue below the nipple;

in women, a fold of tissue below the mammary gland. The method which he had always employed, and which answered very well, was that recommended by Michaelis, which was as follows:

The powder was dissolved in absolute alcohol ½ c.cm. for each decigram of salvarsan employed, then 10 c.cm. of very hot sterile distilled water was added to this solution in a sterile mortar, then 1 c.cm. of normal sodium hydrate solution (40 grams to the litre) was added for each decigram of the salvarsan powder (mix well and add 3 drops of ½ per cent. solution of phenolphthalein) and titrate with normal acetic acid (60 grams to the litre) until the colour went. Then add just enough normal sodium hydrate solution to just make the solution faintly alkaline. Stir well and inject slowly half of the total quantity (10 c.cm.) into each buttock. The patient should lie on his stomach for at least half an hour after the injection, and the parts should be gently massaged during the injection, in order to distribute the injection as much as possible. The time occupied in injecting each half-dose should be between two and three minutes, if not longer.

If pain followed the injection he injected ¼ grain of morphine hypodermically. Patients should be kept quiet in bed for at least three or four days after the injection, otherwise they were liable to get severe pain in the sciatic nerve and elsewhere. They had always injected in the gluteus maximus, in a situation about half-way between the posterior superior spine and the second sacral vertebra; in that situation there was no danger of wounding either the gluteal or ischiatic arteries.

Meltzer had lately recommended injecting into the sacro-lumbar muscle, a site particularly recommended by him owing to the richness in capillaries of muscular tissue and the intramuscular pressure, both of which favoured penetration of the substance injected. As regards site, Meltzer drew a line between the highest points of the crest of the ilium and the spinous process of the third or fourth lumbar vertebra, and introduced the needle at the level of the junction of the inner and middle thirds of this line; the needle was kept parallel to the spine, and the point inclined upwards and slightly inwards. Meltzer said that injected in this manner there was scarcely any pain, provided that the needle was made to penetrate well into the lumbo-sacral muscle, which was relatively easy unless the patient was very fat.

Fleet Surgeon Andrews had lately written home for a special syringe and a new medium consisting of a mixture of two oils (Graisse de lainé anhydre sterilisée 1 partie, Huile d'oeillette froissage sterilisée 9 parties, suggested by MM. Lévy-Bing and L. Lafaz, of Saint-Lazare Hospital, Paris), by means of which the salvarsan powder is suspended in about 2 cg. of the oil. This method was highly recommended, but he saw no reason why one should adopt it in preference to Michaelis's method.

THE statistics published recently of visitors to Karlsbad last season show an increase of 2,500, making a total of 71,000. This figure includes only legitimate "cure-guests," whose average stay was 27 days. Casual visitors numbered some 250,000. The number of English and American visitors remained practically stationary, owing, it is thought, to the bad returns in the month of June caused by the Coronation. Australian visitors showed an increase of 34, South American 145, French 70, Turkish 30, Roumanian 200, Swedish 25, and Austrian 841.

THE title of Professor has been conferred upon Dr. Lydia Rabinowitsch-Kempner, of the Pathological Institute attached to the Charité Hospital in Berlin. This is, so far as we are aware, the first instance of a medical woman receiving this distinction in Germany. Professor Rabinowitsch-Kempner is best known by her maiden name of Lydia Rabinowitsch, and acquired no little fame in connexion with her very exact and careful researches on the biology and morphology of the tubercle bacillus. She discovered the acid-fast "butter" bacillus, the acid-fast bacillus of gangrene of the lung, etc., contributed a number of most important observations on the nature of and differences between the bacilli of human tuberculosis, bovine tuberculosis, and avian tuberculosis, and carried out numerous researches of high value in other branches of bacteriology. The resistance to the idea of creating a woman professor in the medical profession of Germany has been stubborn, and it is not too much to state that had Professor Rabinowitsch-Kempner belonged to the other sex her attainments would have long ago secured for her the title which she has now received. We congratulate her on having secured the just recognition of her undoubted ability, and look for still further marks of recognition in the near future.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

Partial Thyroidectomy and Exophthalmic Goitre.

THE debate between members of the medical, surgical, and anaesthetic sections on the subject of partial thyroidectomy under local anaesthesia, with special reference to exophthalmic goitre, was again continued on March 5th, Mr. J. W. MCCARDIE, President of the Section of Anaesthetics, being in the chair.

Reopening the subject Mr. ARTHUR BARKER said that though he had listened, in Berlin, to Professor Kocher's analysis of his own extensive work, and to the great debate which followed it, and had closely studied the subject since, he did not feel that a strong case had yet been made out for the operative treatment of Graves's disease. That was his confession of faith in regard to Graves's disease, though it did not apply to some thyroid tumours associated with milder forms of thyroidism. Dr. Hale White's admirable way of putting the matter had considerably strengthened his conclusions. It was the effect of the thyroidism as expressed in the nervous system which had to be feared, and the great liability to fatal shock from operations which, without the thyroidism, would cause no shock. Dr. Hale White's analysis of a large number of cases treated medically showed a mortality for exophthalmic goitre of 15 per cent., as against 7½ per cent. among the same number of ordinary people. Mr. Trotter's analysis of his 50 cases gave a 10 per cent. mortality—no improvement on the medically treated cases in Dr. Hale White's list. For most of his thyroid operations Mr. Barker used local analgesia, and he had been well satisfied with it, although in certain cases general anaesthetics, with scopolamine and morphine had been employed. Where local analgesia was employed it should be combined with morphine or some other general sedative, and should be carried out by some one familiar with the details and able to complete the infiltration quickly and efficiently, so as to gain the confidence of the patient. He concluded by paying a warm tribute to the special anaesthetist.

Mr. CHARTERS SYMONDS said he had not a large experience to record of operations on cases of exophthalmic goitre. Dr. Dunhill's fourth class seemed to contain a good many cases which would generally be regarded as nervous patients with ordinary goitre, and that made it difficult to form an accurate estimate of mortality. It was necessary to distinguish between patients who were nervous and had a goitre and persons who had true hyperthyroidism. The kind of case which the latter had to be differentiated from was that of which he had an instance: A lady aged 40 for some time was thought to have exophthalmic goitre; there were all the symptoms except exophthalmos. Operation was delayed, and he watched her for a considerable time. After a few months the right lobe was somewhat larger, the left diminished, and a localized tumour appeared, and when that was successfully removed she got well. There should be a closer examination of the other organs of the body, and possibly of the blood also; and he counselled a closer association between the physician and the surgeon in this selective function, an aspect which he feared was being rather neglected. He hoped cases would be met with at an earlier stage in the future, and that operations upon them would occupy the same realm of safety as ordinary thyroidectomy. There seemed too great a tendency to operate in a general way, and in some operations frequent performance was necessary to ensure safety. A record of all the operations during the last five years for this condition, with the mortality, would probably cause many to hesitate about operating. One of the chief results of the discussion was likely to be a more correct estimate of the condition of the patient.

Mr. DONALD ARMOUR said he had operated upon 26 cases (24 females, 2 males), but had not done it in any case without consultation with one or several colleagues. There was one operative death, and that patient, in the light of more recent knowledge, should not have been operated upon; she was in the last degree of the disease, and had incessant diarrhoea and vomiting, illusions, and great emaciation. It was the only case in which he used local anaesthesia, and that was because she was so restless.

She died a few minutes after the completion of the operation. He had discontinued the operation of ligature, preferring partial thyroidectomy. He removed one lobe and the isthmus, and part of the second lobe if advisable. All rough handling and squeezing of the gland must be avoided. In one case he crushed it, and the pulse rose to 180. Large quantities of saline should be given per rectum for the two or three days following the operation, or subcutaneously, if it was not retained in that way. He used drainage only exceptionally. All the cases except the one which died had been either much improved or were well. With one exception, all the cases had a general anaesthetic.

Mr. WALTER EDMUNDS mentioned that Dr. Dunhill placed in his fourth class cases of adenoma of the thyroid gland with some tremor, some staring of the eyes, and an easily excited heart. These, Mr. Edmunds considered, should be regarded as cases of Graves's disease, for they had both its symptoms and its pathology. Adenomata played a part in well-marked cases of Graves's disease, and he gave examples. Also, the goitre of Graves's disease often consisted of different lobules in various degrees of structural change. He had recently published a series of cases treated by himself and others with milk from thyroidless goats and by other non-operative means, and of the 13 cases so dealt with, 10 were much benefited or quite well, 1 was about the same, and 2 had died. It was doubtful if either of these two could have been operated upon. Probably the reason none of Dr. Dunhill's patients had had tetany was that one or more parathyroids were left intact. He also had noticed what Dr. Dunhill mentioned, that the eye corresponding to the completely removed lobe receded much more than did the other. Unilateral exophthalmos was not very rare: 109 cases were said to be on record. The choice of the anaesthetic should be made on general grounds. The indications for operation he considered to be: (1) Asymmetry of and unequal consistency of the goitre, suggesting an adenoma; (2) the non-yielding of the case to medical treatment; (3) threatened ulceration of cornea.

Dr. SCHARLIEB considered that for these cases chloroform and ether were safe, and that the nervous element and the liability to psychic shock were factors against the employment of local analgesia. Half an hour before giving the general anaesthetic the patient should have hypodermically $\frac{1}{150}$ to $\frac{1}{60}$ gr. of atropine, and the anaesthetist should allow the patient to assume any posture that he preferred, and permit him to get breath after getting to the operating table. One should begin with a mixture of chloroform and ether, or chloroform and absolute alcohol; then a change could be made to open ether or chloroform administered by any dosimetric method. The anaesthesia should be full for the first incision, and then considerably lightened, to be again deepened for the insertion of the final sutures.

Dr. G. A. H. BARTON said that in his experience general anaesthesia in partial thyroidectomics had proved adequate and safe, and since reading Dr. Kocher's advocacy of local anaesthesia some few years ago he had kept a special record of his cases. They only amounted to thirty-three, of which eight were cases of Graves's disease. They were not sufficient to dogmatize on, but so far as they went they supported his view, and a study of them had enabled him to form some tentative opinions as to the best method of general anaesthesia to be adopted. The two main dangers were from circulatory failure in cases associated with Graves's disease, and from asphyxia in cases in which the trachea was compressed. Personally he had not met with the former. He had had eighteen cases in which the trachea had been more or less compressed, in some accompanied by marked dyspnoea and stridor, but had occasion to administer oxygen in five cases only. In none had any real cyanosis developed. A source of minor embarrassment in some cases was a tendency to laryngeal spasm, cough, swallowing, and retching, frequently associated with falling back of the jaw. The position of the head encouraged these symptoms, and they were sometimes due to too light anaesthesia and sometimes to dragging on the trachea during enucleation of the tumour. The method of anaesthesia employed during the earlier cases was generally a slow induction with the C_2E_3 mixture, followed by the use of Junker's apparatus, with chloroform or a mixture. In the later cases he had used injections of scopolo-morphine, with or without atropine and after using a little C_2E_3 to commence with had continued with open ether, given in his own inhaler. Very little anaesthetic was required in these later cases, minor embarrassments were obviated, and the circulation improved; after-effects also were frequently *nil*. Of the 33 cases, 21 were excellent in every way, mostly improving during anaesthesia; 9 developed the minor difficulties referred to, causing a little annoyance but no anxiety; 2 cases had severe haemorrhage, one requiring a saline infusion; in 2 cases oxygen was given for threatened asphyxial complications, in both relieving promptly and efficiently. He considered the best results were obtained by a preliminary injection of scopolo-morphine, followed by open ether and the administration of oxygen on the appearance of the slightest duskiness. Considering the nervous type of patient dealt with and the occasional occurrence of severe haemorrhage, he was of opinion that the balance of advantage lay with general as opposed to local anaesthesia.

Mr. RUPERT FARRANT said that examination of a number of cases of Graves's disease showed there was a definite cycle from thyroid excess to thyroid insufficiency. He looked for hyperthyroidism at the commencement of the cycle, even though it might be very slight. It was impossible to say to what height the hyperthyroidism might attain before it went on to insufficiency. There was a second group in which Graves's disease was associated with other diseases, as shown by Dr. Hale White twenty-five years ago—such as dyspepsia, osteoarthritis, and mental symptoms. Examination of 1,000 lunatics from this point of view revealed a definite thyroid circle, running its course parallel with the nervous and mental symptoms. If hyperthyroidism were recognized one to three years earlier than at present he believed Graves's disease would cease to exist.

Mr. H. J. PATERSON strongly criticized the statement that the administration of a general anaesthetic in goitre cases was unattended with risk. Chloroform in such instances, whether by the open method or by appliances which were supposed to ensure the dosimetric method, he considered unjustifiable. This contention he believed would be supported by hospital records. He pleaded for a clear definition of what was meant by Graves's disease, as many writers included cases in which there was no exophthalmos, and such nomenclature led to misconception when discussing operative results. The symptoms of hyperthyroidism were protean, and were not necessarily present in an individual case. Preparatory treatment by rest, administration of belladonna, and the application of x rays as carried out in the Mayo clinic were important. In the practice of the brothers Mayo the operative mortality in cases of exophthalmic goitre was now only 3.9 per cent. The word "cured" was now being used somewhat loosely and unscientifically; it should be applied only to cases which had lost all the symptoms and were quite well.

Mr. H. M PAGE reported his experience in connexion with 25 cases, and expressed his agreement with Dr. Scharlieb concerning the question of general and local anaesthesia. In his last 11 cases open ether was given, with oxygen during the whole time. In only one case was there a real increase of pulse at the end of the operation; in one there was great haemorrhage, but the patient seemed little worse next day.

Mr. BETHAM ROBINSON spoke highly of the intravenous method of inducing anaesthesia, which was not only much better for the patient but rendered the operation much easier. He felt sure some cases had departed somewhat hastily on account of the administration of chloroform.

Mrs. DICKINSON BERRY regretted that the discussion had not thrown more light on the question of how far the general anaesthesia was an additional risk, even when taken well. She recalled two cases, operated upon by different surgeons, in one case chloroform and in the other ether being employed. No anxiety was felt on account of the anaesthetic, though towards the end there was considerable collapse. The anaesthesia was very light, yet both died within a comparatively few hours of the operation. The question arose whether those deaths would have occurred if there had been no general anaesthesia. One patient, a woman, who had a local anaesthetic, only

said afterwards that she did not like feeling the blood running down.

The President spoke of the influence of the thymus in the condition under discussion. Surgeons complained that the preliminary and later injections complicated their work, particularly in operations about the neck, yet in the worst cases the even slight toxic effect of a general anaesthetic should be avoided. He thanked Mr. Berry, in the name of the meeting, for bringing about such an interesting and important three-day discussion.

Mr. James Berry, in concluding the debate, said he did not intend to give his views in detail, as he expressed them at the debate before the Hunterian Society two years ago. His operations for the removal of goitres of various kinds amounted to 670, but those in which he felt justified in operating for true Graves's disease were only 11. It was misleading to include cases simulating Graves's disease in the gross statistics; these latter were very satisfactory for treatment by operation. In most cases of true Graves's disease he had refused to operate. Even at the present time, when our knowledge of the technique had been greatly advanced by the labours of the Kochers in Switzerland, the Mayos in America, Dr. Dunhill in Australia, Mr. Edmunds, Mr. Leedham-Green, Mr. Trotter, and others in this country, much still remained to be done before operating on Graves's disease could be considered as really satisfactory. He strongly deprecated anything like indiscriminate operating for Graves's disease, and to believe that a case of that disease had only to be operated upon to be cured forthwith was a grave mistake. He had been able to collect the statistics of 97 cases which had occurred in various large London hospitals in the last few years, marked examples of the disease. The total number of deaths among them was 16, 12 having occurred within forty-eight hours of the operation. Of the survivors most were reported to have been benefited by the operation, some in a very remarkable manner. But little was known of the ultimate results. In only 10 of the 97 local anaesthesia was used, and in at least 55 chloroform was the anaesthetic. The poor results in this country were probably due to not having operated early enough. On the other hand, the prognosis in early cases was not wholly bad, and many patients recovered completely under medical treatment. If several months of medical treatment did not bring about improvement, the question of operation might reasonably be entertained. The condition of the patient was so miserable that one should not dwell too much on the mere mortality of the operation. His conclusions were: (1) Operations for true Graves's disease must always be regarded as serious, even dangerous; (2) the danger was greatest in acute cases and in advanced cases in which there was degeneration in muscle, especially that of the heart; (3) the danger could be much mitigated by strict precautions before, during, and after operation; during the operation strict asepsis and exact haemostasis were very important; (4) considerable judgement was required in estimating the exact amount of gland tissue to be removed. Hemithyroidectomy seemed often to be the operation of choice. Most patients showed marked reaction a day or two after operation. The most important matter after the operation was the administration of large quantities of fluid, and here local anaesthesia had a great advantage over general, as the patient could at once drink the fluid necessary. Chloroform he objected to. In conclusion, he showed a patient on whom he had operated seven months previously, and who was now very much better, but not cured.

Section for the Study of Disease in Children.

At a meeting on February 23rd, Dr. G. A. Sutherland, President, in the chair, the following were among the exhibits:—Dr. R. Hutchison: A case of *Hysterical vomiting and achylia* in a girl aged 10 years. About two years ago the patient's mother died suddenly; the vomiting set in immediately after this event, and continued in spite of treatment in two hospitals, when the child came under observation at the London Hospital three months ago. She weighed 1½ st., and the skin was dry, brown, and scaly, but there was no visceral disease, though the bowels were somewhat loose and a test meal showed complete achylia. Under treatment by isolation, suggestion, and the use of hydrochloric acid and pepsin the vomiting had entirely ceased, but the nutrition had not much improved. Dr. H. Thursfield: An instance of *Bile-stained teeth* in a boy who had been jaundiced for several months after birth; he had also during the first week of life passed very black stools, and had a purulent discharge from the navel. The two lower central incisors, when erupted, were a vivid yellow tint, and had since become green. The tint varied considerably, being occasionally quite bright and at other times dull. Dr. F. Langmead: A corresponding case of bile-stained teeth. In this case the jaundice began between two and three weeks after birth, and persisted until the baby was 1 year and 3 months old. It was at first accompanied by enlargement of the liver and spleen, but this disappeared rapidly under treatment by grey powder. Apart from the conditions noted, the child's condition at the time was good and there was nothing to suggest syphilis. All teeth when erupted were bright yellow in colour and obviously pigmented by bile, but the colour had now almost gone. Dr. James Taylor: *Athetoid movements* in a girl aged 5½ years. She was a seventh child; of her predecessors, the first two died a few hours after birth, the third, fourth, fifth, and sixth are alive and well. She was born at full term, but "feet first," and black and blue in colour. Dr. Leonard Guthrie: A case of *Transposition of viscera* in a girl aged 12. The heart was on the right side, the apex being in the sixth space, one inch inside and below the right nipple. Hepatic dullness was absent on the right side, but could be made out on the left side from the level of the sixth rib downwards. The stomach resonance was well defined in the right hypochondriac region. The position of the colon was not ascertained. Dr. J. A. Torrens: A case of *Cardiac bruit* in a girl aged 16 years. There was no history of rheumatism and no history of any cardiac disability at any time. She was a well-nourished and well-developed girl. There was no cyanosis or clubbing of the fingers. The heart was not enlarged to percussion, but the *x* rays showed a globular left ventricle of greater density than normal, suggesting some pure hypertrophy. There was a loud systolic murmur at the base, best heard over the aortic area, conducted into the arteries of the neck, but audible over the entire thorax, back and front. The second sound was quite distinct, but there was no diastolic murmur. The murmur was considered by some speakers to be due to a congenital lesion, and by others to an acquired aortic stenosis. Dr. T. R. Whipham: (1) *Arthritis of the shoulder and hip* in a boy aged 14. When 3 years old he was held up by the arms, and after that his right shoulder "grew out" and the arm could not be raised above the horizontal level. Wasting of the shoulder muscles followed, but nothing further was noticed until nine months ago, when he started walking lame on the left leg. There was pain in the left hip and knee at first, but this had subsided, and the patient had never been prevented from doing his work as a house-boy. A radiogram showed absorption of the head of the humerus and displacement of the shaft under the tip of the coracoid process. The shoulder-joint was ankylosed. There was considerable wasting of the muscles around the hip-joint, whose movements were very limited. The femur was shortened, owing to absorption of the head of the bone. Von Pirquet's reaction was negative. The case was considered as most probably one of tuberculous arthritis. (2) *Proliferative osteo-arthritis of the hip* in a youth aged 18. A year ago he began to experience pain in the left groin, only present when the joint was exercised. He walked with a limp, and the left leg was a half to three-quarters of an inch shorter than its fellow. The muscles around the joint were wasted and the trochanter was prominent. The movements of the joint were restricted, and "creaking" was present. A skiagram showed osteo-arthritic changes in the joint. The case was considered by some to be of an infective nature, and the state of his teeth regarded as a possible cause.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, February 28th, 1912.

Mr. J. M. Cotterill, President, in the Chair.

On the Treatment of Simple Fractures.

Mr. C. W. Cathcart, in opening a discussion on this subject, said that three methods considered to be rival were at present under discussion: (1) The old immobilization

method involved not only the fixation of the fracture, but also that of adjacent joints, and was based on the theory that such immobilization was essential to healing of the bone. Its disadvantages were the long period of lying-up and the protracted convalescence due to stiffened joints and muscles. (2) The massage and early movement method introduced by Lucas-Championnière, in which, it was held, healing was promoted by the free circulation at the seat of injury, by the prevention of adhesions in joints and of deposits in muscles, and by the maintenance of muscular nutrition. Some objections were the greater time and attention required on the part of the doctor, and its unsuitability in certain cases. But the treatment was simple, and it was possible to instruct relatives and entrust them with it. (3) The immediate operation method, associated with the name of Arbuthnot Lane, secured the accurate apposition and firm fixation of the bones by plates and screws. Its theoretical basis was that the normal shape of the bone was essential to proper function. Its disadvantages were the laceration of soft parts that was apt to take place, the loss of muscular function during wound healing, and the high degree of surgical skill requisite, which was against the general application of the method. Each of these methods had a field of usefulness, and he offered the following points for consideration: (1) A modified immobilization method gave good functional results in most shaft fractures in children; and in shaft fractures in adults (femur excepted) where bony displacement and laceration of soft parts were not great. (2) Massage and early movement gave more rapid results in the previous class of cases, and was the treatment of choice for fractures near or implicating joints except where immediate operation was indicated (see (3)); in shaft fractures without angular or axial deformity, and where complete restoration of length was not essential; also in cases otherwise suitable for operation, but in which it was contraindicated by the patient's age or constitution, by local sepsis of the skin, etc. (3) Immediate operation—reliable technique being essential—was advisable in recent transverse fractures of the patella in healthy adults; in joint fractures where fragments hindered movements; where nerves were involved, or muscle intervened between the broken bones; where muscular attachments were broken off, and could not be otherwise replaced; where there was unavoidable angular deformity, especially in the lower limbs; and in fractures of the shaft of the femur in certain classes of adults where restoration of the length of the limb was of special importance, as in applicants for the public services. The speaker then discussed the best form of treatment in certain special fractures. In Colles's fracture, a proper reduction was important, both for aesthetic reasons, to secure free movement at the wrist. He used an anterior splint, and a posterior one was optional. Employing immediately warm fomentations and gentle massage, and possibly passive movements of the fingers, he advised active movement by the third day, removal of the splint in from ten to fourteen days, and of the sling in three weeks. In this fracture the old immobilization method gave bad results, and operation was seldom called for. In Pott's fracture, massage and early movement, combined with splints, again gave very good results, though operation was occasionally employed. In fractures of the shaft of the femur, while the results were almost always excellent in children, they were much less so in adults, even when Lucas-Championnière's methods were employed. In the latter group of fractures there was certainly room for improvement, and operation might yet be shown to be the superior method.

In the debate which followed Professor ALEXIS THOMSON declared himself a follower of Lucas-Championnière. With regard to fracture of the femur, the extension apparatus of Steinman was more efficacious than any other. Mr. WALLACE said he was also a strong believer in massage and early movement, which had been taught for many years by Professor Chiene. In Colles's and Pott's fractures splints were not necessary to prevent redisplacement; a sling or sandbags were sufficient. Mr. SCOT SKIRVING advised operative methods in fracture of the femur with much displacement. Muscular laceration was avoided by keeping to the fascial planes. Mr. WADE described the routine methods of treatment of fracture in out-patients. Massage and passive movements were practised from the first, and active movements within three or four days. Where patients could not attend frequently to receive this treatment, it was generally possible to instruct relatives in its application. Mr. E. S. CARMICHAEL said that the work of professional masseurs in fractures often required the most careful supervision, and that massage was best carried out by the doctor, though this involved much time. Mr. DOWDEN said that bandages were useless in fracture of the clavicle. The only thing required here was a sling. Shortening often occurred, but allowed a perfect use of the arm. Dr. LANGWILL spoke of the unsatisfactory after-results of fractures. Patients for long after leaving the surgeon's hands were disabled from work. If it were not possible to keep these patients in hospital for the necessary time, they might be asked to return for inspection at stated times. Mr. G. CHIENE said active movement was much more valuable than so-called passive movement. He showed two specimens illustrating functional efficiency in widely-separated fractures of the patella. Dr. PIRIE WATSON said that splints were not important, while massage and early movement were all-important, and could not be started too soon—indeed, they should precede reduction. Massage should always stop short of causing pain. Dr. ORR, Dr. RITCHIE, and Mr. STRUTHERS also spoke, and Mr. CATHCART replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Friday, February 2nd, 1912.

Mr. R. H. WOODS, President, in the Chair.

Congenital Dislocation of the Hip.

MR. WALTER STEVENSON showed two cases of congenital dislocation of the hip treated by Lorenz's method, together with skiagrams exhibiting the local appearance at different stages of treatment. In the first case, a child aged 3, the final photograph showed the acetabulum to be fairly well arched, while examination of the patient showed that the leg was still held a little in advance and abducted, but this was gradually improving. The patient could now get about very well. Treatment extended over fourteen months. In the second case, a child aged 3½, treatment was continued six months, and the last plaster—a movable one—was still on. Examination of the patient showed that the joint was now in good position.

Mr. W. S. HAUGHTON also showed skiagrams of a case under the same treatment. They demonstrated, he said, that Lorenz's method was safe and satisfactory, but as is had to be done with a considerable amount of strain it wat better that it should be performed by those in the habit of dealing with bone cases. The PRESIDENT said that the series of photographs showed in the clearest possible way the process that took place in the growth of the acetabulum. It was also clear that the method was a scientific one, and an extremely close imitation of normality when the deformity was considered. These cases were very difficult to deal with successfully by the older methods.

Mr. STEVENSON, replying to questions, said that since April, 1910, he had come across seven cases of congenital dislocation of the hip, and in one case of double congenital dislocation the patient was 22 years of age. The patient in this case, however, was well developed and able to get about very well, and it would not have been advisable to have tried any treatment. As to the age of election to treat cases, very few were recognized before they commenced to walk, but the sooner the treatment was undertaken the easier it would be found to get the head of the femur into the acetabulum, and the more likely were the bones to develop into better shape. Tenotomy was necessary in all cases that he had seen, and in the two cases just shown the abductor muscles stood out considerably. Sometimes the muscles were ruptured by the hand, but tenotomy seemed to him a better way. The interval between the stages was guided by the *x*-ray skiagrams, but at first it was advisable to keep the plaster on for a considerable time; however, after six months' treatment it should be changed more frequently.

Abdominal Aneurysm.

Mr. W. I. DE C. WHEELER exhibited two cases of abdominal aneurysm in the region of the coeliac axis. One patient had returned to work fifteen months after operation; the second case was operated on six months ago. Colt's instrument was used in both instances—a cage of 150 in. of gilded wire being introduced in the first, and a

wisp of 105 in. into the second case. The prominent symptoms before operation were intense pain in the back, marked epigastric pulsation, and digestive disturbances. A systolic murmur could easily be detected over the tumour. Mr. Wheeler considered that the pain in the back, which was severe enough to require morphine before operation, was more likely due to the stretching and heaving of the peritoneum of the posterior abdominal wall than to erosion of the vertebrae. This was borne out by a *post-mortem* examination of a third patient, who died of rupture of the aneurysm secondary to intestinal obstruction a week after the introduction of wire. In each of the three cases the pulsation and the pain in the back became more violent for a few days after operation, and then rapidly improved, the pain completely disappearing. At present it would be possible to diagnose an abdominal aneurysm in the man operated upon fifteen months ago from continued pulsation, but otherwise he was in excellent health. The case operated upon six months ago had now little or no pulsation, the systolic murmur had disappeared, and he was apparently cured. The operation should be attended by the most rigid aseptic precautions. In his reply to the discussion the exhibitor agreed with Mr. Pearson's suggestion that the method was not suited to cases in which the aneurysm was fusiform.

THE MIDLAND AND WESTERN COUNTIES OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting at Birmingham on February 20th, under the chairmanship of Mr. CHRISTOPHER MARTIN, a scheme for the establishment of a new medical society reached fruition. In moving a formal resolution for the foundation of the society, Dr. MALINS said that a feeling had long existed that in respect of obstetrics and gynaecology the provinces were not adequately represented. Within the area of the Midland, Eastern, and Western counties there were localities and large towns in which much activity was displayed in the pursuit of obstetrical and gynaecological knowledge; there were also teaching centres and hospitals where much valuable work was done, and a large amount of treatment carried out without due recognition or opportunity of record. Attendance at meetings of London societies was a source of inconvenience; outside that great centre there was a great mass of material which could not be utilized to an extent equivalent to its interest and value. The outcome was that the provinces were not only unduly overshadowed, but those living therein found themselves at a disadvantage in respect of opportunities for the recording of experiences and the exchange of views. This position the new society would remedy. On the proposal of Mr. J. FURNEAUX JORDAN, it was resolved that it should be called the "Midland and Western Counties Obstetrical and Gynaecological Society," it being understood that by omission of the word "eastern" it was not intended to exclude from membership those practising in the Eastern Counties, but merely to avoid unnecessary lengthening of the title. It was also resolved, on the motion of Dr. TENISON COLLINS (Cardiff), that the expressed object of the society should be the promotion of the science and art of obstetrics and gynaecology—one which was particularly appropriate, Dr. Collins suggested, since the idea of the formation of the society emanated from Birmingham, the original home of English gynaecology. The constitution of the society in respect of office-bearers was then determined, and is sufficiently indicated by the following list of those elected:—*President:* Dr. Malins (Birmingham); *Vice-Presidents:* Mr. Christopher Martin (Birmingham), Dr. Walter C. Swayne (Bristol), and Dr. H. T. Hicks (Derby); *Honorary Treasurer:* Dr. C. E. Purslow (Birmingham); *Honorary General Secretary:* Dr. Beckwith Whitehouse (Birmingham); *Honorary Local Secretaries:* Dr. D. C. Rayner (Bristol) and Dr. T. Clare (Leicester). *Members of Council:* Drs. Harman Brown (Coventry), Tenison Collins (Cardiff), Wheelton Hind (Stoke-on-Trent), William Smith (Nottingham), and Dr. Calthrop Williams (Woodhall Spa). A pathological subcommittee, with power of co-option, was also formed, Professor R. F. C. Leith, Dr. J. T. Hewetson, and Dr. L. G. J. Mackey being elected thereto for the year 1912–13. A further decision was that the society should be itinerant, and each meeting consist of an exhibition of cases and specimens, and the reading and discussion of "short communications" and formal papers.

HARVEIAN SOCIETY.

AT a meeting on February 29th, Dr. H. J. MACEVOY, President, in the chair, Dr. FARQUHAR BUZZARD, in opening a discussion on *Acute poliomyelitis and allied conditions*, expressed his conviction that acute poliomyelitis would be more generally recognized in its earliest stages if the medical profession had a clear conception of the nature of the disease and were able to form a mental picture of the morbid process underlying it. The cripple bore the same relationship to acute poliomyelitis as did the individual with a pock-mark on his face to varicella or variola. For some years he had been constantly teaching that acute poliomyelitis was one of the acute specific fevers, and that in the medical textbooks of the future it must be removed from the section of nervous diseases and take its proper place with the other acute specific fevers. In describing the symptomatology of the acute stage, he emphasized the importance of examination for paresis in all forms of acute illness in small children when the nature of the condition was not obvious. Pain was frequent not only in the epidemic, but in the endemic cases. He had no faith in Kernig's sign as a clinical test in diseases of the nervous system. In infants the first symptoms often simulated those of other acute specific fevers. Encephalitis was the most closely allied condition, and in the majority of cases depended upon an identical pathological process affecting the higher parts of the central nervous system. Dr. F. E. BATTEN said the experimental production of acute poliomyelitis in monkeys had been carried out by numerous observers in Austria, Germany, France, and America. The virus of poliomyelitis was filterable, would withstand the action of glycerine, and if an organism was ultra-microscopic; the virus therefore had a great similarity to that of rabies. So far only monkeys had developed typical poliomyelitis, but the work of Marks had shown that the disease could be transmitted through rabbits without causing clinical manifestations of poliomyelitis in them. Although epidemics had been known in Europe since 1881, yet during the last decade it had been widely spread over the whole civilized world. During 1910 and 1911 numerous epidemics had occurred in England, but how widely the disease was spread would only be known when there was a more general recognition of the symptoms to which the disease gave rise, and notification was compulsory throughout the country. Dr. GUTHRIE deprecated the practice of testing electrical reactions during the acute stage, more especially in young children, and pointed out the importance of massage and passive movement by the mother when the services of a skilled masseuse could not be obtained. He objected to the use of orthopaedic instruments, on the ground that usually they were much too heavy for the children to carry. Dr. BUZZARD briefly replied.

THE annual report of the Winsley Sanatorium contains the announcement that thanks to the generosity of a donor the sanatorium is quite free from debt. We are not disposed to agree with the medical consultative board that it is not right to give tuberculin in increasing doses to patients not under sanatorium treatment, as this would limit the use of this valuable remedy very considerably. It may be noted that the resident medical officer, Dr. Crossley, is not of this opinion, as he states in his report that it can well be given from a tuberculosis dispensary. Fifty cases had been treated with tuberculin at the sanatorium during the last two years. Twenty-five were given T.R. (bovine) by the mouth, ten B.E. hypodermically, and twenty others, most of them still under treatment, by the same method as the second series. The oral method was given up as being unreliable. The medical officer considers the best way to give tuberculin is to begin with small doses and gradually to increase them. Sufficient time has not elapsed to form any opinion on its efficacy or otherwise. Two hundred and fifty-six cases were discharged during the year; 48 per cent. were fit for some work, 37 per cent. improved, 13½ per cent. did not improve, and 1½ per cent. died.

Reviews.

BACK TO ARISTOTLE.

OF subjects which have given rise to great masses of literature there are few so suggestive of dryness and difficulty as logic. Dr. MERCIER must, therefore, be congratulated on having, in his book entitled *A New Logic*,[1] rendered his treatment of it interesting, and at times fascinating or entertaining. The last quality has indeed been secured by rather merciless ridicule of his predecessors, which perhaps is tactically unwise, though most of us have a secret admiration for uncompromising self-reliance.

Like the founder of logic, Dr. Mercier is in the first place a man of science, in the second a philosopher. Aristotle's treatises were based on elaborate collections and selection of facts, though he by no means parades these researches; the treatises were then collated, harmonized, and corrected with such care that a chronological arrangement of them is now impossible. But the care which he bestowed on them has paid its interest in the permanence of the result; for the history of philosophy is largely the temporary displacement and ultimate restoration of Aristotelianism.

Dr. Mercier's work may be regarded, at least to a considerable extent, as one of these restorations. He attacks, and it would appear with success, the "Traditional Logic" and the "New Logic," but in many of these attacks he has Aristotle actually on his side, while in others the Stagirite eludes him. Since the agreement appears to be unconscious, we may infer that the logic of scientific men in our age bears a striking resemblance to the logic based on science a couple of thousand years ago.

In the "Traditional Logic"—that is, the mediaeval travesty of *Organon*—the proposition is analysed as subject, copula, and predicate. For this Dr. Mercier substitutes subject, object, and a ratio between them, adding that the subject must be a substantive or substantival phrase. Now this last point is emphasized by Aristotle in his definition of a proposition, the name for which is also used by him for ratio; nor has the Aristotelian proposition a copula, the difficulties connected with which are acutely analysed by Dr. Mercier. On the other hand, it has not an object, and it has not escaped Dr. Mercier that this word introduces difficulties.

Dr. Mercier holds that the "Traditional Logic" unduly restricts the modes of reasoning, and his analysis of quantity and quality applied to the terms of the proposition is in the highest degree ingenious and skilful. It is clearly the fruit of long and deep reflection, and appears to defeat the enemies whom it attacks. Yet it may be doubted whether Aristotle would in consequence have altered his theory of the syllogism, and its figures. The syllogism means the mating of two propositions so as to produce a third which is identical with neither. Such fertility, according to him, is only possible where the propositions are reducible to the form, "Mortal follows man, man is ascertained of Socrates"; hence "Mortal is ascertained of Socrates," a proposition identical with neither of its parents. Great numbers of arguments which Dr. Mercier shows to be unrecognized by the "Traditional Logic" are easily reducible to Aristotle's formula. Let us try a case: "If the air is too foul to support the flame of a candle, and it requires purer air to support human life than to support the flame of a candle, the air is too foul to support human life." This would run: "Insufficient to support human life follows insufficient to support the flame of a candle; insufficient to support the flame of a candle is ascertained of the air; therefore insufficient to support human life is ascertained of the air." But the merit of having collected and analysed these various modes of arguing is in no way affected by the fact that the real *Organon* escapes Dr. Mercier's criticisms.

In the treatment of inductive reasoning we again find Dr. Mercier on the side of the Stagirite, only what the former calls induction the latter calls example. A particular snake proves venomous, whence one infers that another snake which resembles it externally is also venomous; what makes this reasoning legitimate? Dr. Mercier answers, "Constancy in experience," not of this particular type of snake, but of the association of certain properties with a certain appearance. "The appearance of all bodies is an index to their properties." This formula is identical with Aristotle's doctrine that the form is to be found in the species—that is, external appearance—but involves a capacity; that which is permanently associated with it is its capacity, all else is accident. But when we come to the question, What are properties and what accidents? both authors have to refer us to some other science than logic.

Instances of this agreement of Dr. Mercier's conclusions with those of his great predecessor might easily be multiplied; where a matter was to be settled by hard and accurate thinking, Aristotle rarely left any one else anything to say; but the merit of having rediscovered many a truth, which is Dr. Mercier's, is not diminished by the fact that the founder of the system had worked out the same. Only it is probable that much of the matter which Dr. Mercier has included in logic would have been regarded by Aristotle as belonging to some other study. And, indeed, many of Dr. Mercier's examples show how very narrow is the scope of logic itself and how quickly the help of other sciences has to be invoked. Thus, in the treatment of "explication" we are told that "If he saw her do it he must have been there when she did it" is "an argument that commends itself to the reason as unimpugnably valid." Aristotle would call in the aid of the science of optics.

However, this "newest logic" will greatly aid the cause of clear and sound thinking, and the devotee of Aristotle in any case will earnestly wish it success. Perhaps it may be added that the circumstances of ill health under which it was composed, with which the public is familiar and sympathizes, make it an astonishing achievement.

[1] *A New Logic*. By Charles Mercier, M.D., F.R.C.P., F.R.C.S.Lond. London: William Heinemann. 1912. (Roy. 8vo, pp. 450. 10s. net.)

MEDICINE AND THE CHURCH.

ONE of the most striking examples of the influence of the operation of the mind, the spirit, the soul, or whatever we may choose to call the unknown force which "informs" our tenement of clay, is unquestionably religious faith. We have often pointed out how effectual this may be in the cure of affections that are not organic, especially those belonging to the ill-defined territory of nervous disease, and in the relief of what may be called the by-product of organic disease. On this ground the co-operation in suitable cases of the divine with the physician may be advantageous. We have insisted again and again that the minister of religion must not intrude on the province of the physician, but may help him by removing any existing cause of mental distress which is aggravating the physical ailment, or by inspiring the patient with the faith that we are told will remove mountains. Two or three years ago an organized effort in this direction was made at Boston by the Rev. Dr. Worcester and the Rev. Samuel McComb, Ministers of the Emanuel Chapel in that city. Clergymen were to minister to minds diseased, while for the treatment of any co-existing or underlying bodily complaint the aid of physicians was to be invoked. We believe that this scheme, praiseworthy in its conception, has not been adhered to, the clergymen having embarked on a career of independent practice as healers. This, as we pointed out at the time, is the rock on which such schemes are likely to split. The movement spread to this country, and the ministry of healing formed the subject of more than one discussion at the Lambeth Conference in 1908. Although the subject was kept alive for some time by meetings, letters in the press, and so forth, it seemed to lapse for a time into a state of suspended animation.

Interest in faith healing was greatly quickened by a number of articles which appeared in this JOURNAL on June 18th, 1910. The whole question has for some years been under the consideration of a Subcommittee of the British Medical Association, whose report was published in the SUPPLEMENT of July 15th, 1911, p. 125. As that report has not yet been finally adopted by the Association, any detailed reference to it would be out of place here. In the meantime we may pass in review some notable utterances which have been made by authorities, clerical and medical, in an interesting volume published some

time ago.[2] The book appears under the editorship of Mr. Geoffrey Rhodes, who has taken an active part in furthering the movement for the co-operation of the clerical with the medical profession. A foreword by the Bishop of Winchester puts the case clearly in the following words:

> There is no doubt that scientific medical men are not going to pay attention to evidence of an unscientific character. They will not waste their time over it. Nevertheless, to phenomena duly attested and to evidence scientifically recorded they will give the most scrupulous attention. It is the detailed and accurate collection and classification of facts by those who are trained for the task and expert in its process that must precede generalization upon this new—or shall we call it revived?—branch of therapeutics.

The Bishop, we are glad to note, expresses confidence that the Church will never identify itself with charlatan methods which might delude the poor and ignorant into the superstitious idea that they can be more cheaply and effectively healed by a magic or thaumaturgic ministry than by the knowledge and skill of trained and certificated doctors and surgeons. When, however, the Bishop goes on to say that it looks as if science were only just now awakening to the realization of its possibilities through psychical treatment, and as if the Church had never yet realized to the full its responsibility and its power in ministration to sickness and its influence over the reason and the imagination, we are less disposed to agree with him. The Church was perhaps in old days somewhat too eager to assert its power in ministration to sickness and to exaggerate its influence over the reason and the imagination.

The book consists of an introduction and a number of contributions. In the introduction the editor gives an interesting review of the whole subject. That he clearly understands the relation between the spiritual and the material in this matter is shown by his statement that "the respective spheres of action of the cleric and the doctor have to be mapped out, so that all the efforts of the one may support and never hamper the other." All treatment, he says, whether it be by means of drugs, surgery, or hypnotic suggestion, must necessarily be a matter for the doctor and those working under his immediate direction, and for them only. This well expresses the spirit in which the book is written. We may be allowed to express our gratification that the views which we have often expressed have obviously furnished inspiration to most of the writers and that the BRITISH MEDICAL JOURNAL is freely quoted throughout the volume.

The second part of the introduction consists of communications received from Sir Clifford Allbutt, the Hon. Sydney Holland, and a well-known surgeon who veils his identity under the initials "F.R.C.S." Sir Clifford Allbutt says that strange healings do take place under religious influences, and he adds:

> And at no time in history were miraculous cures more frequent and wonderful than in the Temples of Aesculapius or of Serapis. Modern cures, whether of the Eddyites or at Lourdes, or the like elsewhere, when compared with those of the Roman Empire, fall into insignificance.

In regard to this statement, we venture to submit that the "insignificance" of the modern cures is attributable to the fact that these things are now done in the light of day, and are tested or can be tested in a way with a critical keenness that was not applied to the cures of the Roman Empire. We are in full agreement with Sir Clifford Allbutt, however, when he says that a careful study of all reported cures of a miraculous kind proves that they all—palsies, convulsions, and the rest—are, and have been, cures of one disease and of one only—namely, hysteria. Surely we may here say, with Sir Thomas More: "Marry, this is somewhat!" The cure of hysteria is the cure of a very real disease. That all these cures are wrought by suggestion is what we have always held, but the fact of cure must be credited to the agency by which it is produced. Sir Clifford Allbutt will have no mingling of the medical and the priestly functions, but he hopes for a more intimate understanding and a completer sympathy between the representatives of medicine and those of spiritual agencies. Mr. Sydney Holland, in a short note, says that no one who has been connected with one of our big general hospitals can doubt for a moment the advisability of the collaboration of the physician and the clergyman, each helping the patient from his own standpoint. The relations between the surgeon, the clergyman, and the patient are discussed by "F.R.C.S.," who says that it is especially in the case of a patient suffering from a disease such as cancer, which requires an operation, that "the enlightened clergyman and surgeon may join hands for the good of spirit and body."

Dr. Buttar, in a paper which is a valuable contribution to the subject, attempts to define the position of medicine with regard to spiritual methods of healing, and to inquire how far the results justify the movement. In so far, he says, as the spiritual attitude of the patient conduces to his peace of mind, its assistance would be welcomed by every practitioner of the healing art, but it is not easy to conceive that spiritual influence could have any effect on such a disease as ringworm or on such conditions as congenital malformation, aneurysm, valvular disease of the heart, or strangulated hernia. He lays stress on the difficulty of finding facts that will bear scientific scrutiny. Then—and this a point that must never be lost sight of—a medical man is not infallible, and a condition thought to be cancer, for instance, may turn out to be an inflammatory thickening from which recovery might naturally have taken place. Warts, he points out, may disappear rapidly under many forms of treatment or with no treatment at all. We may add that genuine cancer does in rare cases disappear by some natural process of involution which, unfortunately, is still imperfectly understood. Dr. Buttar rightly says that a careful distinction must be drawn between the cure of a disease and the relief of symptoms. It is here, as we have ourselves often pointed out, that spiritual healing, or suggestion, or whatever it may be called, finds a legitimate place. The abolition of pain, the subsidence of swelling, and other improvements of local conditions are all within the sphere of nervous action; but it cannot be too emphatically said or too often repeated that these things, though affording great relief to the patient, are not to be confounded with a cure of the disease. For ourselves we should welcome any influence that would soothe the suffering of a person dying of a painful disease. Dr. Buttar holds that it is most unwise to countenance untrained laymen in carrying on spiritual healing in the name of the Church, and he warns the Church not to attempt to attract believers by means of thaumaturgic displays of healing which are open to explanation in other ways. This is all sound and sensible, and, as far as the Church is concerned, Dr. Buttar points to a very real danger. He seems to us, however, somewhat to lose sight of the patient in his concern for the medical profession on the one hand and the Church on the other. As long as conditions with which medicine has failed to cope are cured by spiritual agencies, processions, etc., so long will recourse be had to them by sufferers. To say that the phenomena are hysterical and that the cures are wrought by thaumaturgic displays is simply to confess the impotence of medicine and to cover up our ignorance by big sounding words. After all, medicine, even at the present day, is largely groping in the dark. This being the case, our attitude towards anything that promises relief which is not obtainable by following the doctrines of the schools should be one of sympathetic readiness to welcome help from whatever quarter it may come, rather than the self-complacency which asks, "Can any good come out of Nazareth?"

Mr. Stephen Paget urges the point at which we have just hinted—that we are in some danger of forgetting the patient. He says that it is on the edge of time between life and death that the professional spiritual healer loves to perform. He desires to make something happen; he will not take it for granted that nothing will happen. His position, Mr. Paget admits, is logical, and may be held in absolute sincerity. Only, he is bound to tell us what in his experience does happen, and he is bound to tell us of every case of failure or partial failure. It is here, as we have so often had occasion to point out, that the spiritual healer is in fault. The Christian Scientists admit no failures, and their position has at any rate a semblance of consistency

[2] *Medicine and the Church.* Being a Series of Studies on the Relationship between the Practice of Medicine and the Church's Ministry to the Sick. By Sir Clifford Allbutt, K.C.B., F.R.S., A. W. Robinson, D.D., Charles Buttar, M.D., Stephen Paget, F.R.C.S., Bishop of Bloemfontein, Hon. Sydney Holland, Prebendary Fausset, M.A., Jane Walker, M.D., T. B. Hyslop, M.D., Ellis Roberts, M. Carta Sturge, H. G. G. Mackenzie, M.A., M.D. Edited, with an introduction, by Geoffrey Rhodes. With a foreword by the Lord Bishop of Winchester. London: Kegan Paul, Trench, Trübner and Co., Ltd., Dryden House, Gerrard Street, W. 1910. (Post 8vo, pp. 307. 6s.)

in this, that as they hold there is nothing to be cured, there can be no failure if nothing is cured. On the other hand, the guardians of Lourdes and other miraculous shrines freely admit failures, and they explain them by saying that God works as He pleases.

Even they, too, might be more frank in admitting failure. In the JOURNAL of August 20th, 1910, we published some selected cases as to the genuineness of which there seemed to be evidence such as would be admitted in a court of law. From private information we know that one of these —a very striking case, if it could have been accepted as true—has since proved a failure. As far as we know, this fact has not been published. Mr. Paget says, "Till the alleged wonders of spiritual healing and its unpublished failures have been all submitted to keen scrutiny, and to every severest and most searching test that can be devised in science, nobody who knows anything about pathology can take much interest in them." The worst of it is that there is so much upon which science, with the severest and most searching tests, can throw no light and which yet, if human testimony is to be accepted at all, does sometimes happen that we must often be content to acknowledge our ignorance.

Dr. Jane Walker, dealing with the relation of priest and doctor with patient, says the idea of mental influence on disease was first scientifically formulated about twenty-five years ago. This is rather a strange statement in view of the fact that advantage has been taken of the mind cure both by priests and physicians since the dawn of history. The name "suggestion" is comparatively new, but the thing itself is as old as man.

Dr. Hyslop writes on faith and mental instability. He says that "of all the hygienic measures to counteract disturbed sleep, depression of spirits, and all the miserable sequelae of a distrait mind, he would undoubtedly give the first place to the simple *habit* of prayer."

Dr. H. G. G. Mackenzie discusses pretty fully the medical aspects of mental healing. As a considerable proportion consists of extracts from our own columns on the Society of Emanuel and other forms of faith healing, a detailed review of the essay is unnecessary. He sums up his conclusions as follows:

> Medical science has at her command a vast accumulation of clinical material on which she is able to form a clearly reasoned judgement. There is no such thing in medicine as a *chose jugée*, no single verdict ever found but is open to revision if the evidence is satisfactory.

How this is to be reconciled with the statement that medical science is able to form a clearly reasoned judgement on the clinical material that has been accumulated, we do not understand. Nor do we agree with Dr. Mackenzie's further statement that the limits of psychotherapeutics, spiritual or otherwise, are according to our present knowledge sufficiently well defined. We should say that it is just such a definition of these limits that is needed and is, unfortunately, still wanting. He says the unostentatious healthy influence of a cultured Christian gentleman has a potency which no manipulation or ritual is in the least likely to enhance. If he will equip himself with the necessary information as to the patient's actual physical condition, he can set to work to exercise his influence with the knowledge that he will probably effect more, so far as a permanent result goes, than all the self-styled healers. Dr. Mackenzie does not, however, tell us how the cultured Christian gentleman is to equip himself with the information required as to the patient's actual physical condition. If he knows nothing of medicine he cannot do so for himself; he must, therefore, apply to the doctor for the knowledge. Even then, when he is in possession of the knowledge, there is no hint as to how he is to use the influence given him by his culture.

On the Reverend W. Yorke Fausset's essay on Our Lord's Attitude Towards Sickness, which falls within the province of theology, we do not propose to dwell. The same writer in another essay expounds the principles of modern Christian healing. It is interesting, but we cannot say that it is very illuminating. We venture to point out to Mr. Fausset that his history is somewhat shaky when he describes Ambroise Paré as the faithful physician (*sic*) of Louis XIV. The Grand Monarque had a small regiment of physicians, surgeons, and apothecaries in his service, but Ambroise Paré was not of them, for the sufficient reason that he died about half a century before Louis was born.

Mr. Ellis Roberts writes on the Church and Mental Healing. The essay is mainly a discussion on the Lambeth report, which has been sufficiently dealt with in the BRITISH MEDICAL JOURNAL. He takes the view which we have often expressed, that the divine has a place in the sickroom as well as the doctor. But we would add the condition that the patient should ask for, or at any rate consent to, the ministration of the divine, whose intrusion on an unwilling person would be worse than useless. Of the Rev. Arthur Robinson's essay, entitled the Eucharist and Bodily Well-being, it is outside our province to speak. The book ends with essays by the Bishop of Bloemfontein on Prayer and Mental Healing, and Miss M. Carta Sturge on the Metaphysics of Christian Science. As Miss Sturge is driven to the conclusion that such a hopeless confusion of contradictions is scarcely worthy of the name of metaphysics, or of serious discussion, we can only express regret that she should have wasted time in discussing Mrs. Eddy's teaching.

The whole book may, perhaps, be not unfairly described in one sentence as a plea for the restoration of miraculous powers to the Anglican Church. The cynic may scoff or the philosopher may sigh at these pretensions, but the book is to be commended as a praiseworthy effort to bring two professions which minister to the spirit and body of man into harmonious co-operation.

TRANSPLANTATION, HETEROPLASTIC AND HOMOPLASTIC.

IN a monograph on heteroplastic and homoplastic transplantation[3] SCHÖNE brings into line the facts already known through experimental biology, experimental surgery, such as that of Carrel, and even recent work in cancer pathology, regarding the problems of tissue-grafting. These he supplements by numerous carefully planned experiments of his own, chiefly in connexion with skin transplantation. As regards the value of organ-grafting or tissue-grafting from an alien species, Schöne is rather sceptical; he holds that the phenomena of haemolysis and the observations of mouse-tumour inoculation are against it; and from his own experiments he would conclude that not only do heteroplastic transplants always fail to become integral parts of the host, but that these grafts actually exercise a toxic influence on the economy. The only service they can be to the surgeon is that, in replacing a damaged structure, they may be easily organized by the proper tissues of the host.

Homoplastic transplantation is useful to the surgeon and frequently such grafts become incorporated, but according to Schöne's experiments with skin, failures are by no means infrequent, even when the provider and the new host are blood relations. This fact is of considerable importance, as showing the extremely subtle but undoubted biological differences that exist between individuals of the same species, as has been pointed out in recent papers by Bashford and others, on mouse-tumour inoculation. Schöne goes further and shows that in homoplastic grafting, though to a much less extent than in heteroplastic, a toxic factor has to be reckoned with. He insists on the individuality of an animal's own tissues, on the biological resentment to such as are not autogenous, and he contrasts with the fate of these the invariable success attending grafts taken from other parts of the same animal. At the same time he emphasizes the fact that a tissue such as the skin retains its characters depending on its original position—for example, in the nature and lie of its hairs.

The monograph shows an extensive acquaintance with the literature of the subject, such as might be expected in the case of a surgeon and experimenter of Schöne's eminence. The biliography is valuable.

OPERATIVE SURGERY.

WRITERS of textbooks on operative surgery "for students and practitioners," as the favourite phrase runs, frequently seem to find themselves in the unenviable and uncomfortable position of being in two minds. The writer desires his book to contain the latest operative improvements and

[3] *Die heteroplastische und homöoplastische Transplantation.* Von Dr. Georg Schöne. Berlin: Julius Springer. 1912. (Roy. 8vo, pp. 161, 29 figs., and 1 plate. M. 8; Bound, M. 9.)

advances for the benefit of practitioners, but he cannot tear himself away from the exercises of operative surgery, the ligature of arteries, and the ancient amputations deemed necessary for the student. Dr. A. Oberst's textbook of operative surgery[4] presents the operations on the extremities in admirably clear and concise fashion with apt illustrations. We do not know any book in which students will be able to grasp more quickly the various amputations of the foot and knee, while the methods of ligature of arteries, the vast majority of which have never been tied by surgeons except on the cadaver, are plainly and in the least possible number of words set forth. The descriptions of operations on the neck, thorax, and abdomen are by no means so well or so amply done. The surgeon called upon to amputate does not think about Chopart and Lisfranc, Carden and Gritti, but contents himself with cutting his coat according to his cloth, making the most of the material left him by the railway smash or the tuberculous sinuses; but when he operates for the removal of tuberculous glands in the neck, or for strangulated hernia, or for intra-abdominal haemorrhage, he is in a fresh field, and has got to be very precise and definite in his movements, and must show respect to the course of vessels and nerves and to the arrangement of muscles. Now the sections of this book dealing with regions are inadequate and scrappy and not quite up to date. For example, sufficient emphasis is not laid on lateral anastomosis of bowel as the method *par excellence* of joining intestine. Murphy's button and circular suture are now almost universally discarded, and yet Dr. Oberst gives them prominence. Then, again, inguinal colotomy, when the gridiron method of dividing the abdominal muscles is used, is a much simpler operation than the author's text and illustration indicate; and we hope that no one will attempt a gastro-jejunostomy on the meagre amount of information he finds in this work. There are some glaring inaccuracies of illustration which we feel bound to point out. The Czerny-Lembert suture of bowel is wrongly figured on page 155; the inner row of sutures should include the mucosa as well as the musculosa and serosa. Then the surgical knot should be shown as a reef knot with the first loop doubled, and not, as on page 5, as a "granny." And, lastly, the picture on page 148 of the mode of curling up the separated sac in Macewen's operation for radical cure of hernia, is incomprehensible but apparently wrong.

NOTES ON BOOKS.

The scope of *Pharmaceutical Formulas*,[5] the eighth edition of which has recently appeared, is well indicated by its subtitle of "The Chemist's and Druggist's Book of Useful Recipes for the Drug Trade." The latest revision has resulted in the addition of some 400 new formulae, while alterations are also numerous. The preparations range from toilet articles (skin creams, applications for the hair, etc.) to writing inks and varnishes. The chief value of the formulae to medical practitioners will be in the information they give as to the probable composition of many proprietary articles or others of which the formula is not divulged by the maker or vendor.

Readers of fiction are now familiar with the device of making the record of a motor tour the peg on which to hang a love story, but Mr. Archibald Birt (Dr. A. B. Brockway) has managed to vary this rather threadbare theme very pleasantly by charming descriptions of Australian life and scenery. His recent novel, *The Locust and the Ladybird*,[6] is a clever combination of guide book and novel, wherein the course of true love runs almost as smoothly as did the the two cars which gave their names to the book. The story, which is written in the form of letters from a busy doctor in Sydney to his sister at home, gives some entertaining pictures of life in New South Wales; and an additional interest is imparted by the many excellent photographs which illustrate the route followed by a party of motorists in quest of fresh woods and pastures new.

[4] *Kurzgefasste chirurgische Operations lehre für Studierende und Aerzte.* Von Dr. Ad. Oberst, I Assistent an der chirurg. Klinik und Privatdozent für Chirurgie an der Universität Freiburg. Berlin: S. Karger. 1911. (Sup. roy. 8vo, pp. 198; mit 232 zum teil farbigen Abbildungen. M.6.20; bound, M.7.)

[5] *Pharmaceutical Formulas.* By Peter MacEwan, Phar. Chem., F.C.S. 8th edition. London: Offices of the *Chemist and Druggist*, 42, Cannon Street. 1911. (Post 8vo, pp. 1056. 10s. net.)

[6] *The Locust and the Ladybird.* By Archibald Birt (Dr. A. B. Brockway). London: Sampson, Low, Marston and Co., Ltd. 1911. (Demy 8vo, pp. 251, illustrations 31. Price 6s.)

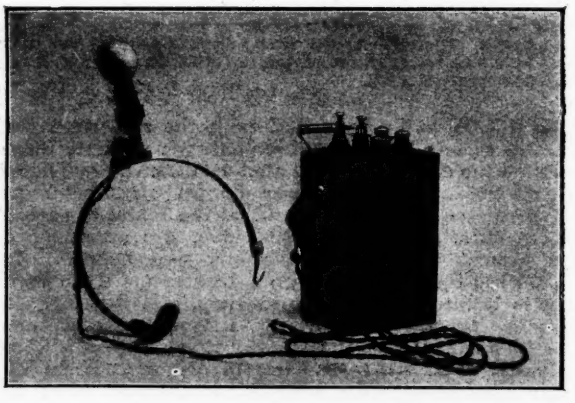
The report of the *Proceedings of the Canal Zone Medical Association*[7] for the half year ending March, 1911, contains some nine papers, each followed by more or less lengthy discussions. Dr. Darling records a case of Oriental sore which originated in Panama itself, and was apparently due to the bite of a tabanid fly. Another is a study by Drs. A. B. Herrick and T. W. Earhart of the bone changes in leprosy, the conclusion drawn being that their characteristic—that is, either progressive distal or concentric atrophy—is of much utility in the differential diagnosis of early cases. Dr. W. E. Deeks gives a brief summary of an investigation by Dr. W. M. James and himself into the etiology of haemoglobinuric fever. It suggests that the condition is due to a ferment generated by all malarial parasites, but only capable of acting as a haemolytic in certain conditions, the precise nature of which remains to be determined.

[7] *The Proceedings of the Canal Zone Medical Association.* Vol. 3, Part 2. Issued by the Quartermaster's Department of the Isthmian Canal Commission, Mount Hope, Canal Zone, Central America. (Medium 8vo, pp. 114.)

MEDICAL AND SURGICAL APPLIANCES.

A Portable Electric Lamp for Retinoscopy.

Dr. Alfred C. Norman (House-Surgeon, Sunderland and Durham County Eye Infirmary) has designed a portable electric lamp, suitable for retinoscopy, which he thinks will be found useful in the medical inspection of school children. It has been made from his sketch by Messrs. T. Miller and Co., of 32, Lauriston Place, Edinburgh. It consists of a head band carrying an 8-candle power 4-volt frosted Osram lamp suitable for that purpose. Dr. Norman writes: The diameter of the lamp bulb is 1¼ in.—a size which I have found to give a very sharply-defined shadow. At the base of the lamp-holder is a switch for turning on the current. The connecting cords are long enough to allow of the battery being placed upon the floor behind the patient's chair. The band is so applied to the child's head that the lamp is in the vertical axis of the body, a position which renders retinoscopy of either eye an easy matter. At the anterior end of the head band there is an adjustable hook to receive the



bridge of the trial frames; this prevents the frames from slipping out of place in the case of children with small noses. The whole thing weighs less than 8 oz., and is supplied in a leather case measuring about 8 in. by 6 in. The battery is a 4-volt. 30-ampère hour accumulator, in celluloid case, weighing about 6½ lb., and, when fitted into a wood carrying case, measuring about 4 in. square by 7 in. high. It can be recharged at any garage for 6d. or 9d., but when constant work is to be done it is advisable to have two batteries, so that each can be charged about once a week. I myself have given the instrument a good deal of use, and it has been adopted by an ophthalmic surgeon to one of the county councils. It has so far given complete satisfaction.

The Wassermann Reaction.

Messrs. Burroughs Wellcome and Co. have issued in convenient form and quantity two of the reagents necessary for carrying out the Wassermann test. These are "Wellcome" brand alcoholic extract of guinea-pig's heart (for use as antigen), and "Wellcome" brand haemolytic serum for sheep's corpuscles (for use in the Wassermann and other complement deviation tests).

LITERARY NOTES.

IT is announced that it is intended to publish a life of Lord Lister. The President of the Royal College of Surgeons of England, Mr. Rickman J. Godlee, will be glad to receive any letters of scientific interest likely to be of assistance in the preparation of the work. Such documents should be addressed to Mr. Godlee at 10, Wimpole Street, Cavendish Square, W. They will, if desired, be returned after having been copied.

At a meeting of the Royal Institution, held on March 4th, the special thanks of the members were returned to Mr. J. C. Simpson for his present of an original letter from Mr. Riebau, the bookbinder to whom Faraday was apprenticed, giving some account of Faraday's early life.

A new publication, entitled *Annals of Tropical Sanitation*, is to be issued shortly by the Liverpool School of Tropical Medicine. It will be edited by Sir Ronald Ross, K.C.B., F.R.S., with the assistance of Colonel W. G. King, C.I.E., D.P.H., and Professor W. J. Simpson, M.D. It will be published in at least four parts every year. The annual volume will contain at least five hundred pages, and the size of the page will be the same as that of the *Annals of Tropical Medicine and Parasitology*.

At a meeting of the Académie des Inscriptions et Belles-Lettres, held on February 2nd, M. Martha, Professor in the Faculty of Letters of the University of Paris, communicated the results of his long researches on the deciphering and translation of the Etruscan language, to which hitherto no key has been found. Two of the inscriptions deciphered by him relate to medicine. One is somewhat remotely connected with medical practice, and the proposition it expresses would not find favour with many doctors at the present day. It reads as follows: *Fuflunsul pachies vel clthi*, which, according to M. Martha, means, "Wine is the best means of soothing pain." The other, which is written on a leaden plate, seems to be a medical consultation between a healing god and the relatives of an old man of 80 years, who could take nourishment only with difficulty. The remedy ordered is a thick soup made of cereal seeds, washed down with water. We give the statement of the case as translated by M. Martha:

> The father, aged 80 years, feeds himself, alas! in a wretched manner. On account of the weakness which has supervened at the end of the season (or of the disease?) the difficulty is chronic. His food is cut into pieces sufficiently small. Oh supreme majesty! owing to the fact that there is no movement of the jaw the food remains in the obstructed gullet. Alas! by reason of the weakness of the patient, the grandfather walks very awkwardly. As a consequence of two recent falls, alas! the shoulder is a little swollen and the skin is discoloured. His temper, which was good, has become bad, and he gets no refreshing sleep.

Here is the prescription of the divine doctor:

> Be of good cheer. If the powerlessness of the jaw continues: a cereal porridge in sufficient measure. From that moment the act of nourishment will go on well. Should a little morsel accidentally stick in his throat the swallowing of a spoonful of cold water poured in drop by drop will make the passage easy. If the shoulder is swollen and the blood extravasated, let the spot be rubbed with grease and the blood swelling will disappear and the little father will become perfectly amiable.

It is to be hoped that the old gentleman recovered both his power of swallowing and his temper.

There is, perhaps, no more striking feature in the history of the French Revolution than the strange contrast presented by the principal actors of this terrible drama in their public and private capacities. The very men who, as rulers of Paris during the Terror, outrivalled Nero or Caligula in their inhuman ferocity, were for the most part affectionate husbands and fathers, and sedulously practised in the bosom of their families the virtues in which, once away from home, they were so conspicuously lacking. Dr. Charles Esmonet, however, writing in *Le Progrès Médical* for December 9th, 1911, finds an exception to this almost universal rule in the case of Marat, whose blood-stained political career he considers as quite in keeping with his temperament and character as manifested in early life. And yet, like so many of his *confrères*, Marat, until the outbreak of the Revolution, had done nothing to forfeit the right to be regarded as a perfectly upright and honest citizen. His own master since the age of 16, he had wandered half over Europe before he finally settled down to practise in France, and had earned wherever he went the reputation of being an able physician and an honourable man. Part of his prolonged *Wanderjahr* was spent in England, where he lived for ten years and where several of his essays and pamphlets were published; and where, also, he received an honorary degree as Doctor of Medicine from the University of St. Andrews. He appears to have had a flourishing practice in Church Street, Soho; and besides being the inventor of a bougie which he considered invaluable in cases of chronic urethritis, he was extremely successful in his treatment of certain diseases of the eye, thanks to his studies in his favourite sciences—optics and electricity. When, in 1777, he at length returned to France, he sprang at once into fame through his cure of the beautiful Marquise de Laubespine, whom the Court doctors had declared to be dying of consumption, and who was restored to health by a course of Marat's famous "Eau factice anti-pulmonique," a preparation of lime water and alkali of which the inventor never divulged the secret. This marvellous cure obtained for Marat the post of physician—not "horse doctor," as Carlyle says—to the bodyguard of the King's brother, the Comte d'Artois, and was the means of his gaining an extensive private practice, which he proceeded to turn to the best possible account by charging extremely high fees. He did his work conscientiously, however, and such of his notes as have survived prove that he took great pains over the examination of his patients. But his popularity as a fashionable physician did not last long. From his earliest years he appears to have been of a morbidly jealous and suspicious nature, and a man with whom it was difficult to live on easy terms; and now at the turning point of his career he managed to estrange even the most indifferent of his professional brethren by his discourtesy and his furious diatribes in defence of his own theories. The refusal of the Académie des Sciences to admit him as a member of their body was a cruel blow to his vanity, and little by little he seems to have persuaded himself that he was the victim of the plots and machinations of his colleagues. This mania of persecution coloured the rest of his life. Chance soon gave him the opportunity of avenging first his own and then the people's wrongs, and from persecuted to persecutor was but a step. Like the tiger, Marat, having once tasted blood, could no longer live without it; and it was amidst the acclamations of those whose interests he believed himself to be serving that the execrable "Ami du Peuple," once a cultured and popular physician, perished in the storm which he himself had helped to raise.

The *Chemical World*, the first number of which appeared in January, is intended "to fill a space in the scientific literature of this country which is not at present fully occupied, and present to those interested in the many branches of chemistry an account of progress, in both theory and practice, discussing such other matters as may be expected to influence the future progress of this science." It is edited by Mr. W. P. Dreaper, F.I.C., and published by Messrs. J. and A. Churchill. If we may judge from the contents of the first number, the periodical seems likely to serve a very useful purpose.

Dr. Henry Barnes (Carlisle) asks if any reader can help him to the name of the author of the following lines:

> Glorious your aim, noble is your art
> To war with death and stop his flying dart.
> To trace the source whence the fierce contest grew,
> And life's short lease on easier terms renew;
> But when more powerful ills all efforts brave
> To ease the victim no device can save
> * * * * * * *
> But smooth the lingering passage to the grave.

He adds: "In 1882 I was attending a boy who had a long and distressing illness, during which I had the advantage of a consultation with the late Dr. Hughlings Jackson, and in which, with this help, we had been able

> To trace the source whence the fierce contest grew,
> And life's short lease on easier terms renew;

but when, ultimately, the only thing we could do was to 'smooth the lingering passage to the grave,' I happened to quote some of the lines to the boy's mother in the course of the attendance. She asked me for a copy, which I gave her, and she now writes, after this long lapse of years, to ask me if I can tell her the missing words of the seventh line. I have in vain searched through my library for the quotation, and I shall be grateful if any one can complete it for me, and tell me under what circumstances, and by whom, the lines were originally written."

BRITISH MEDICAL BENEVOLENT FUND.

AT the February meeting of the committee twenty-eight cases were considered and grants amounting to £281 made to twenty-seven of the applicants. Appended is an abstract of the cases relieved:

Daughters, aged 50 and 48, of M.D.Aberd. Means very slender and health indifferent. Voted £2 and application to be reconsidered.

Widow, aged 45, of M.D.Edin. Has been in very poor health since the death of her husband last year, and asks for a little help to meet unavoidable expenses. Voted £5.

Widow, aged 50, of L.R.C.P. Practically unprovided for at husband's recent death after a long illness, but hopes to maintain herself and her children by taking boarders. Voted £10.

L.R.C.P., L.R.C.S.Edin., aged 55. Asks for a little help to tide over difficulties which are quite expected to be temporary. Voted £10.

Widow, aged 46, of M.B., C.M.Aberd. Husband's savings quite exhausted by a long illness ending in death, and, although temporarily earning sufficient to support herself, has incurred heavy expenses owing to the ill health of a daughter, recently deceased. Voted £10.

M.R.C.S., aged 55. Has had bad health for the last ten years and has recently been incapacitated for several months, during which his practice has almost disappeared and unavoidable debts have been incurred. Proposes to make a fresh start in the colonies. Voted £10 towards passage money if emigration is decided on.

Widow, aged 41, of M.B., C.M.Edin. No income; has recently lost her husband after a two years' illness, and has five children to support. Voted £12.

M.R.C.S., aged 84. Only income a small Poor Law pension. Relieved twice, £24. Voted £12.

Daughter, aged 55, of late M.R.C.S. No income, and through failing eyesight is unable to earn more than a few shillings a week, which goes to support not only the applicant but two sisters who are unable to earn their living. Relieved twice, £36. Voted £18.

Daughter, aged 60, of late M.R.C.S. No income, and unable to earn a living on account of a painful deformity. Voted £12.

Widow, aged 56, of L.R.C.P.Edin. No income, and practically dependent on a daughter earning only a few shillings a week. Relieved twice, £20. Voted £12.

Widow, aged 42, of M.R.C.S., L.R.C.P. Since husband's death three years ago has been endeavouring to establish a boarding-house, but has now exhausted her small capital. Three children, aged 13 to 6. Relieved twice, £24. Voted £10.

Widow, aged 52, of L.R.C.S.Edin. No income; endeavours to support herself by nursing, but has no certificate; children unable to help. Voted £12.

Daughter, aged 63, of late M.R.C.S., L.S.A. Supplements a small pension from a charitable society by taking boarders, but finds increasing difficulty in meeting her expenses. Relieved once, £10. Voted £10.

Widow, aged 67, of L.R.C.P., L.R.C.S.Edin. No income, and unable to obtain employment; no children. Relieved four times, £34. Voted £12.

Daughter, aged 37, of late M.R.C.S. Is a nurse by profession, but unable to support herself as such owing to incurable deafness, and is consequently dependent upon uncertain earnings from needlework, etc. Relieved seven times, £63. Voted £10.

M.R.C.S., aged 77. Was appointed doctor to a Medical Aid Association eighteen months ago, but has found it impossible to obtain his salary. Relieved once, £18. Voted £6.

Widow, aged 63, of M.R.C.S. Had a little capital at husband's death some years ago, but lost it in the attempt to establish a boarding-house, and is now quite without means. Relieved once, £12. Voted £12.

Daughters, aged 71 and 64, of late M.R.C.S. Were fairly provided for at father's death, but have lost practically everything through unfortunate investments, and are now living together in a bed-sitting room. Relieved once, £18. Voted £18.

Widow, aged 70, of M.R.C.S. Nursed and supported her husband for several years, and is now dependent for a home on a son-in-law who can ill afford to help. Relieved twice, £20. Voted £10.

Widow, aged 67, of L.F.P.S.Glasg. Has supported herself, with occasional grants from this fund, since her husband's death thirty-eight years ago, but is now dependent on a daughter earning £1 a week as a cashier. Relieved seven times, £72. Voted £12.

Widow, aged 67, of M.R.C.S. Only income a small pension from another charity, and is frequently laid up for months together owing to a chronic affliction. Relieved seven times, £64. Voted £5.

Daughter, aged 61, of late L.S.A. Has supported herself for several years by letting lodgings, but finds increasing difficulties owing to ill health and competition. Relieved three times, £36. Voted £12.

Widow, aged 62, of M.R.C.S. Quite unprovided for at husband's death five years ago, and endeavours to maintain herself by receiving boarders. Children only just self-supporting. Relieved once, £12. Voted £10.

Widow, aged 62, of M.R.C.S. Quite unprovided for at husband's death, and dependent on a married son earning a small weekly wage as a shop assistant. Relieved eight times, £94. Voted £12.

Widow, aged 62, of M.R.C.S. No income and health indifferent; children only able to give slight assistance. Relieved thirteen times, £147. Voted £12.

Widow, aged 53, of M.R.C.S. Since husband's death has tried to support herself by taking boarders, and is now in difficulties, which she hopes will be temporary. Relieved twice, £22. Voted £5.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 15, Wimpole Street, W.

THE CARE OF THE RECOVERED INSANE.

THE annual meeting of the After-Care Association, for poor persons discharged recovered from asylums for the insane, was held on February 28th at Queen's Gate Hall, South Kensington, Lord CLAUD HAMILTON, M.P., presiding.

The report of the Council explained that the association had been able to accomplish useful work in finding occupations for persons discharged recovered from asylums. Many of these people were quite capable of following suitable employment, but the anxiety and strain of seeking it for themselves were more than they could undertake at first. During the year applications on behalf of 399 persons were received; of these 221 were women and 178 men. This was a considerably larger number than had been dealt with in any previous year. Some were declined as it was felt they would be unable to bear the strain of ordinary occupations, and therefore did not properly come within the scope of the association's work. An increasingly large number of those who had been assisted, it was gratifying to note, had repaid the whole cost of their outfit or had sent donations. The association had received in subscriptions during the year £1,353 11s., and had expended £942 7s.

The CHAIRMAN spoke in commendation of the work the After-Care Association was doing throughout the country. It was surprising how much was done with the limited income at the disposal of the association. The difficulty of obtaining employment for persons regarded as "tainted with lunacy" must be considerable, having regard to popular prejudices, but it was to be hoped that the public would gradually come to realize that it did not follow, because a person had been at one time in an asylum, that a recurrence of the disorder was to be expected.

Dr. PERCY SMITH, in moving the adoption of the report, described the organization by means of which the association carried on its work, and gave particulars of a number of typical cases which had been helped. He said that if the association had not lent a helping hand these people would have found the greatest difficulty in starting life again.

Dr. C. HUBERT BOND (a Commissioner in Lunacy), in seconding, remarked that among the many factors that caused a patient to break down and require attention, the one that stood out most numerously—perhaps not most importantly—was worry; and of all the varieties of mental worry, lack of employment and its attendant stress was the most prominent. Therefore the association was doing a very important and useful work. It was a godsend to those responsible for the care of the patients in asylums, when they were endeavouring to replant a patient in the world, to know that if no friends of the patient were available the After-Care Association was ready to afford assistance.

The SECRETARY (Mr. H. T. Roxby) appealed to medical superintendents of asylums to become members of the association, and to avail themselves of the organization it provided.

The report was adopted. The re-election of the officers of the association was proposed by Dr. DIXON (Leicester Infirmary), who remarked that the opinion was sometimes expressed that the State, having undertaken the care of the insane, would also make itself responsible for assisting recovered cases to resume the battle of life. For such cases as that, however, personal influence and sympathy were needed, and the After-Care Association through its workers was better able to deal with these people than any State organization in which the personal element necessarily was more or less subordinated. Mr. B. T. HODGSON (a Commissioner in Lunacy) seconded, and the officers were re-elected.

The meeting concluded with a vote of thanks to the Chairman and to Dr. and Mrs. Marriott Cooke, who entertained the members of the association to tea after the meeting.

LONDON SCHOOL OF CLINICAL MEDICINE.

THE annual dinner of the London School of Clinical Medicine (Post-graduate), which is in association with the Seamen's Hospital, Greenwich, was held at Prince's Restaurant, on Friday, March 1st. Vice-Admiral His Serene Highness Prince LOUIS OF BATTENBERG, G.C.B., G.C.V.O., K.C.M.G., was in the chair, and was well supported by a numerous and influential gathering. Over 170 guests were present. Amongst those present were:

Sir Thomas Barlow, Bart., President of the Royal College of Physicians; Mr. Rickman J. Godlee, President of the Royal College of Surgeons; Surgeon-General Sir James Porter, K.C.B., Director-General of the Medical Department of the Navy; Surgeon-General Sir W. Launcelot Gubbins, K.C.B., M.V.O., Director-General of the Army Medical Service; Surgeon-General Sir Arthur Branfoot, K.C.I.E., President of the Medical Board of the India Office; Admiral Sir John Durnford, K.C.B., D.S.O., Chairman of the Commission on the Medical Service of the Royal Navy; Admiral Sir Frederick Fisher, K.C.V.O.; Admiral H. W. Savory, M.V.O.; General the Hon. Sir Reginald Talbot, K.C.B.; Admiral Swinton Holland; Commander G. Hodgkinson, R.N.; Captain A. W. Clarke; and Mr. C. T. Orford Members of the Board of Management of the Seamen's Hospital Society; Sir Henry Burdett, K.C.B., K.C.V.O.; Mr. H. J. Read, of the Colonial Office; Mr. H. F. Heath, C.B., of the Board of Education; Sir Robert Burnett, Sir Frederic Hewitt, M.V.O.; the Hon. Robert H. Lyttelton; Mr. L. A. Bidwell, Dean of the West London Post-Graduate College; Mr. Raymond Johnson; Mr. H. R. Oswald, Coroner for Greenwich; Colonel F. L. Stephenson, C.B.; Lieutenant-Colonel Scanlan; Colonel C. H. Hartt, R.A.M.C., V.D., C.B.; Staff Surgeon C. A. Gayer Phipps, R.N.; Fleet Surgeon R. J. MacKeown, R.N.; Staff Surgeon T. H. Vickers, R.N.; Staff Surgeon A. McCloy, R.N.; Dr. Melvin Graham; Fleet Surgeon P. Bassett-Smith, C.B., R.N., Professor of Bacteriology in the new Naval School; Fleet Surgeon A. Gaskell, R.N., Director of Study and Professor of Hygiene in the new Naval School; Professor W. J. R. Simpson, C.M.G., Lecturer on Tropical Hygiene, London School of Tropical Medicine; Major E. M. Pilcher, D.S.O., R.A.M.C., of the Royal Medical College, Millbank; Dr. Batty Shaw, Dr. York Moore, Dr. F. E. Batten, Mr. Arnold Lawson, Dr. E. D. Macnamara, Dr. A. Butler Harris, Dr. M. G. Biggs, Dr. M. Handfield Jones, Dr. D. Freshwater, Dr. J. H. M. MacLeod, Dr. S. Ernest Dore, Dr. Squire Sprigge, Mr. P. Michelli, C.M.G., Mr. Ralph Glynn, Dr. L. Knuthsen, Dr. David Somerville, Dr. F. E. Taylor, Mr. Herbert Appold Grueber (British Museum); Dr. J. B. Mackenzie, Dr. Kenelm Digby, Dr. C. F. Stebbing, and Dr. Albert Pryse. The staff of the Dreadnought Hospital and the London School of Clinical Medicine was represented by Sir Dyce Duckworth, Sir William Bennett, K.C.V.O., Dr. Frederick Taylor, Sir John Rose Bradford, K.C.M.G., Dr. Guthrie Rankin, Professor R. Tanner Hewlett, Mr. W. Turner, Dr. Russell Wells, Mr. G. N. Biggs, Dr. Wm. Steuart, Dr. Arthur Davies, Mr. R. D. O'Leary, Dr. M. Mackinnon, Mr. E. Rock Carling, Mr. L. V. Cargill, Mr. Richard Lake, Mr. C. C. Choyce, Dean of the London School of Clinical Medicine; Mr. Henry Curtis, Mr. A. J. Walton, Mr. R. E. Bickerton, Dr. W. Fox, Dr. Frederick Langmead, Dr. Gordon Holmes, Sir James Mackenzie Davidson, and Dr. D. W. Carmalt-Jones, formerly members of the staff. The Royal Waterloo Hospital for Children and Women, one of the hospitals affiliated to the school, was represented by Dr. Septimus Sunderland, Dr. W. J. Gow, Mr. H. Pendlebury, Dr. Herbert Williamson, and Dr. T. D. Lister.

After the usual toasts had been duly honoured, the CHAIRMAN proposed "The School." He said: The London School of Clinical Medicine was founded in the year 1906 for the purpose of affording post-graduate students an opportunity of bringing themselves into touch with the most recent developments in medicine and surgery. It was felt that at the Dreadnought Hospital there existed a large supply of clinical material that was lost to medical education, whilst at the same time there was a necessity in London for the further extension of post-graduate teaching. Accordingly the committee of the Seamen's Hospital Society was approached, and, its sanction having been given, the school was founded. It being necessary for the purposes of the school largely to augment the number of members of the honorary medical staff so as to provide additional teachers, the movement readily attracted to itself some of the leading physicians and surgeons of the day, who were gladly welcomed by the then existing staff of the hospital. During the first year's work of the school 68 students attended, mostly, however, for isolated classes, especially in operative surgery. The work has steadily increased from that time onwards, until now most of the students come for many classes, as well as for the operative surgery and clinical teaching of the hospital. Since the school opened in May, 1906, 560 students have been enrolled, and in a number of cases the student has attended more than one session of the school, thus demonstrating his opinion of its efficiency. The students are composed of all classes of medical men, and have included many practitioners in the near neighbourhood of the hospital. Others have come from all parts of Great Britain and Ireland, and already students have been enrolled from Canada, the United States, Peru, Nicaragua, Chili, Brazil, the Argentine, Spain, Greece, Holland, Germany, France, India, Burma, Assam, China, Straits Settlements, Australia, New Zealand, and South Africa. In addition, the school has been well attended by members of the medical services. Numerous R.A.M.C. and I.M.S. and Colonial Service officers have been students, either before or after their entrance to the service. From the very first, naval surgeons seconded for study have availed themselves of the advantages offered by the new school, and within the last eighteen months, owing in large measure to the action taken by the Durnford Commisssion, acting in conjunction with the present Director-General, Sir James Porter, systematic courses of instruction have been afforded to naval surgeons, and have been attended by from twenty to thirty officers annually. It is hoped that in the future an even closer relationship will be established with the Naval Medical Staff following upon the establishment of the new Naval Medical School at the Royal Naval College in Greenwich. The committee and staff of the school are anxious to do all in their power to co-operate with the naval authorities to make the new Naval Medical School a success, and they hope to be permitted to contribute much of the clinical and other instruction necessary to make the curriculum complete and up to date. The close neighbourhood of the Dreadnought Hospital to the Royal Naval College should prove convenient to the students of the Naval Medical School, and every effort will be made to meet their requirements and to provide them with the clinical opportunities which their service requires. The teaching in the London School of Clinical Medicine is in some respects unique, and the instruction afforded is particularly applicable to surgeons in the Royal Navy, because the class of patients admitted to the Dreadnought and the diseases treated there are identical with those met with in the Royal Navy. The Dreadnought Hospital and the Clinical School provides one of the most complete courses of instruction in operative surgery in the kingdom. This is so fully appreciated that the demand is greater than the resources of the school can meet, because it stands alone amongst the medical schools of Great Britain and Ireland in the facilities it possesses for practical instruction in this department of surgery. The clinical material and teaching opportunities of the school are augmented by the affiliation of certain hospitals and the assistance of extramural teachers; thus, the Waterloo Hospital for Children and Women, the General Lying-in Hospital, York Road, and the Bethlem Hospital for Mental Diseases are attached to the school, and teaching is given by numerous members of their staffs. In addition, the Royal Eye Hospital, Southwark, and the London School of Tropical Medicine grant a reduction of fees for students coming direct from the clinical school, and recently some members of the staff of the Miller Hospital at Greenwich have, at the invitation of the School Committee, joined our group of extramural lecturers. The Dreadnought Hospital is especially interesting to naval officers in that, as is most appropriate in a hospital devoted to the interests of the seamen of the Mercantile Marine, the Admiralty has found a home for the principal hospital of the society since its establishment in 1821, first by providing vessels afloat and subsequently by placing at the disposal of the society the old infirmary of Greenwich Hospital. In this building, which has gradually been so extensively altered as to become a modern and fully equipped hospital, the work is now carried on, under the title of the "Dreadnought"—a name which is derived from one of the old wooden fighting ships which formerly served as a floating hospital in the Thames. From what has been said it will be seen that this valuable School of Medicine, like its sister establishment the Tropical School, could not have existed without the kindly co-operation and assistance of the Board of Management of the Seamen's Hospital Society. This body, under the Chairmanship of Mr. Perceval A. Nairne, has taken a deep interest in the formation of the schools, and has

advanced their interests in every way in its power. The hospitals are charitable institutions, supported by a generous public. Every one who realizes what the nation owes the men of the Mercantile Marine should contribute to the maintenance of such excellent and necessary institutions, and although this is not an occasion upon which it is desired to make an appeal for money, it may be hinted to those who are generously disposed, that an addition to the financial resources of the Seamen's Society would be more than welcome, and would assist both the development of the Clinical School and the capacity for increased usefulness of the old Dreadnought Hospital. The medical profession recognizes with gratitude the co-operation and assistance of the Board of Management of the Seamen's Hospital Society in placing the opportunities which the charity affords in the matter of medical education at their disposal.

The toast was responded to by Sir MALCOLM MORRIS, who said the dinner was unique in the numbers present, in the distinction of the guests, and especially in the honour conferred on the school by the presence of Prince Louis of Battenberg in the chair. Speaking of the school and the Dreadnought Hospital, he drew a vivid contrast between the state of things which prevailed in hospitals when he was a house surgeon and their present condition, a revolution due to the genius of the great man who had just passed away, Lord Lister. He referred to the fact that the great advances in surgery coincided more or less closely with the immense changes that had taken place in the navy. After a graceful allusion to the honour that had been conferred on Sir James Mackenzie Davidson, he concluded by paying a tribute to the work done by the Dean, Mr. Choyce, and the Secretary, Mr. Michelli.

The toast of "The Medical Services," including the Naval Medical Service, Royal Army Medical Corps, Indian Medical Service, Colonial Medical Services, which also represents the West African Medical Service, was proposed by Captain A. W. CLARKE. He said that in proposing this toast he would reserve to the last any remarks he might make upon the medical department of the Senior Service. The army had its own medical school at Millbank under the leadership of Surgeon-General Sir Launcelot Gubbins, and military surgeons as a rule returned to their own school for post-graduate study. In addition, however, a fair number of officers had exhibited their keen desire for additional work by taking out classes at the Dreadnought, especially when stationed in its neighbourhood. Some of them had added to the facilities supplied to them at Millbank by taking extra classes of operative surgery with the teachers at the Dreadnought. They were always very welcome visitors to the school. The Indian Medical Service, on the other hand, had no school, and officers on study leave sought those centres of study in which individual members of the corps desired to specialize. The clinical school opened a vast field in which it was possible for the officers of that service to avail themselves of study under many of the leading surgeons and physicians of the day. Arrangements had been made by the Medical Board of the India Office, which was presided over by their most distinguished guest, Sir A. M. Branfoot, and as a result many of his officers had come to the school and availed themselves of the advantages it afforded. The authorities of the school were glad to find that the number of Indian Medical Service officers steadily increased, and hoped that this meant that the work provided in the school met their special needs. The Colonial Medical Service, the greater part of which consisted of the West African Medical Service, was administered from the Colonial Office, and no one, said the speaker, took a deeper interest in that particular branch of the work than his colleague on the Board of Management of the Seamen's Hospital Society, Mr. H. J. Read. The whole of the medical officers who were under the Colonial Office were afforded from time to time opportunities for post-graduate study, and a large number of them came to the schools of this society. Special arrangements were made by which those who applied might be seconded for instruction in ordinary diseases in the Clinical School. Here, again, he was glad to learn, the officers of this service were showing an increasing tendency to join the school, and to rub medical and social shoulders there with the civilian practitioner student as well as with officers of other services and with the members of the staff. The medical officers of the Senior Service he had left to the last, as he desired to finish his speech in coupling with it the name of the present Director-General. As they had already heard from His Serene Highness, a most important departure had been made in the establishment of a new Naval Medical School at Greenwich, and he (Captain Clarke) did but re-echo the opinions already expressed in attributing to Sir James Porter the success with which this school was approaching completion. He was not unmindful that this school was the outcome of the Commission which had lately sat under the chairmanship of Sir John Durnford, also, he was pleased to say, one of his colleagues on the Board of Management of the Seamen's Hospital Society. He took that opportunity, on behalf of the Board of Management of that great corporation, to express their sincere satisfaction that the new school would be so closely allied to the largest of the hospitals of the society—the Dreadnought Hospital at Greenwich. He further desired to assure the Admiralty that the Board of Management of the Seamen's Hospital Society was most anxious to facilitate in every way in its power the working arrangement between the new Naval Medical School and the Hospital, which it was hoped and believed would be greatly beneficial to the Naval Medical Service. The committee of the Seamen's Hospital Society also believed that the new arrangements would serve the interests of that great charity for which the Lords of the Admiralty had always found a home.

The toast was responded to by Sir JAMES PORTER, who said that although they would before long have a Naval Medical College at Greenwich, they would still have to lean heavily on the Dreadnought.

Sir JOHN ROSE BRADFORD proposed "The Guests" in a felicitous speech; the toast was acknowledged by the PRESIDENTS OF THE ROYAL COLLEGES, both of whom spoke of the value to the nation of the health of our sailors and of the valuable services rendered by the school in spreading and advancing knowledge in that direction.

The "Health of the Chairman" was proposed by Mr. WILLIAM TURNER, who spoke of the valuable inventions in naval engineering which the country owed to Prince Louis of Battenberg.

The CHAIRMAN, in acknowledging the toast, said that when he, with some diffidence, accepted the post of First Sea Lord he found that the medical service was within his official province. But he was encouraged by the fact that he had at his right hand his old shipmate, Sir James Porter. He spoke of the importance of the work done by the medical officers who belonged to the noblest of all professions, and said it was a great satisfaction to him to be the President of so important an institution as the London School of Clinical Medicine.

ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.

AN account of the history, organization, and equipment of the Rockefeller Institute for Medical Research has recently been issued. It gives a full description, with plans, of the various buildings; here we can only give a bird's-eye view of the institute, its aims, and the means by which it is hoped to attain them.

The Rockefeller Institute for Medical Research was founded in 1901, and was incorporated under the laws of the State of New York. The first Board of Directors consisted of Professors W. H. Welch, T. M. Prudden, C. A. Herter, L. E. Holt, Dr. Hermann Biggs, Professor Simon Flexner, and Professor Theobald Smith. In 1908 the charter was amended by an Act of Legislature increasing the powers of the corporation, and enlarging the scope of its activities. The objects were set forth as being to conduct, assist, and encourage investigations in the sciences and arts of hygiene, medicine and surgery, and allied subjects, in the nature and causes of disease and the method of its prevention and treatment, and to make knowledge relating to these various subjects available for the protection of the health of the public, and the improved treatment of disease and injury. The corporation was empowered to use "any means to those ends which from

time to time shall seem to it expedient, including research, publication, education, the establishment and maintenance of charitable or benevolent activities, agencies or institutions appropriate thereto, and the aid of any other such activities, agencies, or institutions already established, or which may hereafter be established." At a meeting held on October 15th, 1910, the corporation adopted by-laws, and created a Board of Trustees and a Board of Scientific Directors. The functions of these two boards were respectively to hold the property of the institute, and to control the scientific work supported by the annual income.

The affairs of the institute were managed by the original board of directors from 1901 until 1910, when, without change of *personnel*, the board became the Board of Scientific Directors in the reorganized corporation. The financial establishment of the institute was secured in 1901 by the pledge of Mr. John D. Rockefeller that he would give the sum of £40,000 for the support of the institute during a period of ten years. At the end of the first year, Mr. Rockefeller promised the additional sum of £200,000 toward the building of a laboratory and the support of the work for the next nine years. From 1901 to 1904 the funds of the institute were applied only in the form of grants to support the work of investigators in different parts of the world. In 1904, anticipating the completion of its own laboratory, the institute leased a small building, formerly a part of the Nursery and Child's Hospital, at No. 127, East Fiftieth Street, and gave it a simple equipment for research in pathology, physiology, and chemistry. Here the first investigations conducted by the institute were begun, under the direction of Dr. Simon Flexner, who had been elected Director of the laboratories of the institute in 1902. In October, 1902, Mr. Rockefeller gave a site for a larger institute, the cost of which was about £60,000. The formal opening took place on May 11th, 1906. In 1907 the work of the institute was placed on a permanent basis by a gift from Mr. Rockefeller of nearly £525,000 as an endowment fund. In 1910 the scope of the institute was still further extended by the addition of a hospital and isolation pavilion. Mr. Rockefeller gave a sum of £730,000, and in 1911 he gave £185,000 more, as an additional endowment to support the enlarged activities of the institute. In 1907 a farm of about 100 acres with buildings was acquired in Clyde, New Jersey, as a place for the breeding and care of laboratory animals and the supply of farm products.

The authorities of the institute believe that the use of animals for the purpose of advancing the knowledge of disease, its prevention and cure, is well justified on the grounds of humanity and necessity. They also believe that whenever the sacrifice of any animal is required by the welfare of human beings, or of the lower animals, that sacrifice should be exacted with the least possible infliction of pain or distress consistent with the attainment of the object in view. Members of the scientific staff are required to conform to this standard in all operations upon animals, and the chief of each laboratory is held responsible for the actions of his assistants in this regard.

The institute is composed at present of the laboratories and the hospital, the work of which is unified. Their common aim, and the connexion of the different buildings with each other, often admits of the same problems being studied both in their biological or pathological and in their clinical aspects. In the organization of the scientific staff of the institute, the principle has been recognized that the ultimate purposes of medical research and discovery may be greatly served by the study of biological and chemical problems that, as such, may appear remote from medical applications. The laboratories are subdivided as follows: Pathology and bacteriology, chemistry, physiology and pharmacology, experimental biology, experimental surgery. The capacity of the hospital is about seventy beds.

The work at any one time is confined to selected cases that bear upon a limited number of subjects chosen for investigation. The subjects chosen in the first year were acute lobar pneumonia, acute anterior poliomyelitis (infantile paralysis), syphilis, and certain types of cardiac disease.

The Director issues bulletins from time to time informing physicians of the diseases chosen for investigation. While making the fullest use of its opportunities for observation and study, the institute recognizes at all times the paramount right of the patient to receive the most effective treatment within the power of the attending physicians.

Under the By-laws of the Corporation no charge can be made to persons treated at the hospital for professional care or service rendered or for board and lodging. All discoveries and inventions made by any person while receiving compensation from the Institute become the property of the Institute, to be by it placed freely at the service of humanity in accordance with the beneficent purposes of the founder.

The Journal of Experimental Medicine, which was conducted by Dr. William H. Welch at Johns Hopkins University from 1896 to 1905, has been published since the latter date under the auspices of the institute. Since the beginning of 1911 it has been published monthly. It is designed to cover the field of experimental medicine, and is a medium for the publication of work conducted in the laboratories of the institute, or elsewhere under its grants. The *Journal* also accepts contributions of a suitable character from other sources. Under the title *Monographs of the Rockefeller Institute for Medical Research* are published from time to time scientific papers which are so extensive, or require such elaborate illustrations, as to render them unsuitable for current periodical issues. The *Monographs* are published at irregular periods, determined by the available material on hand. The published results of investigations conducted in the laboratories of the institute, or under its grants, are assembled at irregular intervals and bound into volumes designated *Studies from the Rockefeller Institute for Medical Research.*

SCIENCE NOTES.

THE possibility that glass can be penetrated or permeated by certain vapours is a question that has engaged the attention of chemists for some time. At first sight the idea seems opposed to our general notions of things chemical and physical. Of course we are familiar with the fact that certain "vapours," such as hydrofluoric acid, attack glass, while, on the other hand, certain radiations, such as those of light, heat, etc., penetrate glass without difficulty, but it is off the line of general experience and observation to find that the vapours of iodine and bromine are able to penetrate glass, in minute quantity it is true, but to a certain extent nevertheless. The fact was demonstrated by exposing silver foil to the action of bromine, a thin sheet of glass intervening. The degree of penetration was found to be very variable, in some cases as much as 10 mg. of bromine being recovered, in others only 0.1 mg. The permeability was found to be greater when the glass was in the crystallized state. For this note we are indebted to *La Nature* (January 6th, p. 85), which treats the matter very briefly.

MOTOR CARS FOR MEDICAL MEN.

MOUNTAINEER asks any medical man in a hilly country, such as Cornwall or Devonshire, to advise him as to the choice of a car. "I should prefer," he writes, "a small four-seated, with three speeds forward and reverse, gate change, Bosch magneto, etc.; but I want one I can rely on, that will last well, and be fairly cheap to keep up."

THE following figures from the third annual report of the Ayrshire Sanatorium, 1911, are of interest. The phthisical cases admitted from July, 1906, to March, 1911, amounted to 295; 216 of these are tabulated according to the stages of Turban-Gerhardt. Ninety-five of these cases were females, 35 in the first stage, 26 in the second, and 34 in the third; 53 are working, 11 are alive but not working, and 31 are dead. Of the 53 working, 29 were admitted in the first stage, 14 in the second, and 10 in the third. Of the cases that died, 3 were admitted in the first stage (1 died of acute pneumonia), 8 in the second stage, and 20 in the third. Of the 124 male patients, 31 were admitted in the first stage, 42 in the second, and 51 in the third. Fifty-one of these are working—26 admitted in the first stage, 16 in the second, and 9 in the third; 13 are alive but not working, and 57 are dead. Of these latter, 4 were admitted in the first stage, 19 in the second, and 34 in the third stage. An analysis of these figures shows, what is well recognized, (1) that the earlier the disease, the better the chance for the individual; (2) that advanced disease is more fatal in men than in women.

British Medical Journal.

SATURDAY, MARCH 9TH, 1912.

THE DREADNOUGHT POST-GRADUATE SCHOOL.

ELSEWHERE will be found an account of the annual dinner of the London School of Clinical Medicine. Several causes combined to make the occasion one of exceptional interest and importance. The presence of the First Sea Lord, His Serene Highness Prince Louis of Battenberg, in the chair, gave a stamp to the school of which he is now the President which may almost be counted as an official approval on the part of the Admiralty. Another significant feature was the presence of Admiral Sir John Durnford, Chairman of the Commission on the Medical Service of the Royal Navy. The approval of the services was expressed by the presence of the heads of the three great departments, and that of the medical profession by the presence as guests of the Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England; this was further emphasized by the presence of many leading physicians and surgeons. Altogether the gathering was a remarkable one, and marked in a striking manner the position which the school has already won for itself in the few years of its existence.

It is needless to rehearse the history of the school; this has already been done in the JOURNAL, and it was admirably summarized in the speech of the Chairman. Since it was opened, in May, 1906, between five and six hundred students have passed through its classes, and it is a testimony to the value of the instruction which it gives that men come there from the most distant parts of the world, as well as from the United Kingdom. It must be peculiarly gratifying to the management and to the medical staff—one of the most brilliant in London—that the value of the school is recognized by practitioners living in its neighbourhood, who take advantage of the large opportunities which it offers of keeping their knowledge abreast of medical progress. By the foundation of the School the Seamen's Hospital Society—to which those who go down to the sea in ships, and the nation, for whose welfare they face every hardship and danger, are already under such heavy obligations—has greatly expanded the scope of its noble work for the benefit of humanity. There have been many difficulties in the way, but these have been overcome by the tact, business capacity, and goodwill of those who have represented the society in the negotiations they have conducted.

The Chairman referred to the establishment of a Naval Medical College at Greenwich. This is the outcome of a recommendation made in the report of the Commission of which Admiral Sir John Durnford was chairman. We may remark in passing that the jealous secrecy with which that report has been kept from the public naturally engenders the suspicion that the Government does not intend to give full effect to its recommendations. We hope that medical members of Parliament will press for its publication. It may not be rash to conjecture that the pigeon-holing of a report which was expected to have a powerful effect in improving the condition of the medical officers of the navy and increasing the efficiency of the service is one of the reasons why that service has recently failed to attract a sufficient number of suitable candidates.

The Naval Medical College, the proposed formation of which was announced in the JOURNAL of October 28th, 1911, will probably be opened in September next. Besides providing quarters for acting surgeons for the first two months of their course, it will supply courses of instruction in bacteriology, hygiene, clinical pathology, and skiagraphy. It will also provide quarters for surgeons who are preparing for the examination for the rank of staff surgeon. These officers will be required to attend courses on the subjects mentioned, but will also be called upon to study the various clinical subjects required for the examination, and for this purpose the Naval Medical College, as Sir James Porter stated, will have to lean heavily on the London School of Clinical Medicine, which, with its own staff and those of the hospitals affiliated to it, will give them opportunities of clinical and practical work they could not otherwise enjoy. The Dreadnought has for many years had no rival in London in the field which it offers for practice in operative surgery on the dead subject. Now it is fully equipped in all other departments as a post-graduate school of the first rank. Lest its connexion with the new Naval Medical College should cause confusion, we wish to lay stress on the fact that the London School of Clinical Medicine opens its doors to practitioners of every kind who wish to furbish up their professional knowledge. It receives medical officers of the army and of the Indian and Colonial Services; that is to be taken as a proof not that it has any exclusively "service" character, but that the value of the teaching given is recognized by men to whom post-graduate instruction is in a peculiar degree necessary. But it should be distinctly understood that it is what the French appropriately call an *école de perfectionnement* in the largest sense for civilian practitioners. The mingling of the diverse elements which compose the School is of itself calculated to enlarge the mental outlook and to widen the sympathies of all.

To every one interested in the advance and diffusion of medical knowledge, with which the welfare of the nation is so closely bound up, the development of the London School of Clinical Medicine must be a matter of keen satisfaction. To the civilizing influence of medicine the British Empire largely owes its existence, and in the growth of knowledge that will enable us to combat disease in climates where the white man still too often finds a grave, mainly lies the hope of the consolidation of that empire. Hence the whole nation has reason to be grateful to the London School of Clinical Medicine and the affiliated institutions which complement its work. To the nation, therefore, it may fittingly appeal for support.

To the profession it makes a special appeal. One of the most striking features in the advance of modern medicine is the evolution of the post-graduate school. It used to be unkindly said of the clergy *initium sermonum finis studiorum*. This cannot be said of the doctor, in whom burns at once what Huxley called the divine thirst for knowledge and the enthusiasm of humanity. It is this thirst and this enthusiasm that lead men to the post-graduate school. Here we wish to touch very delicately on a point which was carefully avoided by all the speakers the other night—the shadow of the Insurance Act hung over them all. But it is a point that must be faced. It is certain that if that Act stands unaltered, the hospitals will be seriously crippled in their power to

afford relief to poor sufferers. The out-patient department will no doubt be the first part of their organization to be retrenched. Before the passage of the Act this contingency might have been regarded by many doctors with philosophic fortitude. But the operations of the Act must change the situation. Unless the administrators of hospitals find it financially possible to maintain the out-patient department for purposes of consultation, the efficiency of post-graduate schools must be seriously impaired. On the maintenance of a high standard of efficiency in the medical profession depends the health of the people. One of the most important factors in maintaining this efficiency is the post-graduate school. If this were to be crushed out by the weight of the Insurance Act, it is not only the poor who would suffer from the lack of opportunities for practitioners to keep themselves thoroughly posted in the latest advances of science; the well-to-do would also be affected, directly or indirectly, by the disadvantages that must follow professional deterioration. We commend this consequence of hasty and ill-considered legislation most earnestly to the attention of those who are charged with the administration of the Act.

THE THESIS.

IN the Middle Ages the thesis held a large place in the acts necessary for graduation. Later it became a formality which sometimes degenerated into a farce—a matter one cannot be surprised at when one notes the subjects that were sometimes offered. To take a few examples from the University of Paris in the seventeenth century—we find such subjects discussed before the Faculty as the following: *An quartanae curandae conveniat ebrietas?* (1658); *Utrum Tobiae ex piscis felle curatio naturalis?* (1668); *An qui mel et butyrum comedit, sciat reprobare malum et eligere bonum?* (1670); *Ex qua parte manaverit aqua, quae profluxit e mortui Christi latere perforato lanceae acuto mucrone?* (1692). Then there came a time when the thesis became a product of a special market. In Germany, as we learn from Fischer in his *History of Surgery*, there was in many of the universities in the eighteenth century a regular trade in theses, and there seems to have been a regular tariff. For instance, for a small fee an ordinary thesis in more or less doggy Latin could be got, and the price increased according to the quality of the Latin, the highest "quotation" being for a dissertation in Ciceronian Latin with original observations, if required, and perhaps drawings. In Edinburgh, towards the end of the same century, the writing of Latin theses was a recognized industry. It is said that John Brown, the famous author of the Brunonian System, for some time made a living by writing theses for candidates for the M.D. degree.

The modern French theses vary immensely in quality, being sometimes the medium chosen by a celebrated teacher for the conveyance of his doctrine, sometimes very bald compilations of historical matter having comparatively little relation to medicine. Of the former type we may mention a series by the pupils of Nélaton, who wrote very little in his own name, but was content to have his results and doctrines promulgated by his pupils. Of late years the standard of the thesis has risen considerably in this country, and London has followed the lead of the older universities in requiring an original thesis for some of its higher degrees. Dr. H. D. Rolleston, of St. George's Hospital, has published a little essay which should be of great value to those who have to write theses.[1] It is so agreeably written that it can be read with pleasure even by those who have not to face the ordeal for which it is a preparation. It is interesting to read that the rule which enjoined that theses should be written in Latin was relaxed at Cambridge only so recently as 1858. The objects of a thesis, says Dr. Rolleston, are: "To show how far the mind has been trained. To stimulate the mind, and to make the candidate think, so that he may be qualified not only to deal with problems, but to report logically and intelligibly on what he has observed." He adds that "although it is not a necessary part of every medical man's life to write papers on medical subjects, the elaboration of a thesis if taken seriously is a valuable, though brief, education in this method." Here, of course, it is assumed that the candidate always writes his own thesis; and probably the defence of the thesis in the technical sense against all objectors was a precaution against vicarious thesis writing. We have known of this defence being arranged between a candidate and his official opponents. This was in a foreign university, and the performance was carefully rehearsed beforehand. Dr. Rolleston quotes from Dr. W. W. Keen some practical hints likely to be useful to writers of theses. The distinguished Philadelphia surgeon recommends that when a journal is read its contents should be catalogued for future use by cross entry under various heads. "Thus a case of perforation of popliteal artery by a splinter of bone in fracture of the femur should be indexed under artery, popliteal, perforation of, etc., and under femur, fracture of, perforation of artery, etc. In this way material is stored up for future articles on the causes of perforation of the popliteal artery and on the complications of fracture of the femur." By adopting this method a methodical man could, says Dr. Rolleston, be prepared to write a more or less interesting article on any subject provided it has an accessible literature.

Although Dr. Rolleston's suggestions mainly concern Cambridge, they are likely to be useful to candidates at other universities. In regard to finding a subject, he suggests that from the early days of working in the hospital notes of a suitable subject, such as might be afforded by the occurrence of two or more examples of a rare disease, or of an unusual symptom or complication in a common disease, should be made, and this material could be utilized as a text of statistical study. He insists that the work necessary for a thesis should be begun as soon as possible, for though it is comparatively easy to write while in constant touch with a hospital, it is difficult in private practice. Speaking of the choice of a title, he gives examples of good and bad titles. Indefinite titles, such as "on gastric ulcer" and the like, are inappropriate as they are too comprehensive. We venture to hint that the same remark applies to writers of papers for journals.

A thesis should contain evidences of research of some kind or another. This may be some problem of clinical medicine, pathology, or bacteriology, or a statistical investigation, or an analysis of a group of cases with a review of current opinion. It should not be merely extracted from textbooks, but must have some basis of cases or other evidence of investigation on the part of the writer. When the title has been settled, the candidate should read up the subject and make notes of everything he can find bearing on the matter. The literature can be looked up by reading a full and standard article and utilizing the references. The Paris theses have bibliographies at the end, but far better sources not mentioned by Dr. Rolleston are the great French dictionaries of medicine. For those who may aim at dazzling the examiners by

[1] *On Writing Theses for M.B. and M.D. Degrees.* London: John Bale, Sons, and Danielsson, Limited.

a display of erudition there is Ploucquet's monumental but little-known work, which is a mine of wealth in the way of medical references up to the year 1800.

The Index Catalogue of the Surgeon-General's Library is another useful source. From the notes obtained from a survey of the literature a scheme of the points to be investigated in the cases which are to form the basis of the thesis should be drawn up. Then the notes of fifty or a hundred cases in the registrar's record or in the *post-mortem* book should be abstracted.

Into the details of arrangement and so forth we need not follow Dr. Rolleston. Something, however, may be said about references. The writer of a thesis or a paper cannot be too scrupulously careful in regard to this matter. An error in a date or a name may cause endless trouble to conscientious persons who follow on the writer's footsteps. We have known a laborious search end in a discovery akin to that of the scholar who held that Homer's works were not written by him, but by a man of the same name. We have known a man turned, in the process of transcription, into a museum. After every possible trouble has been taken, the printer's devil will, out of mere malice, change a 6 into a 9 or vice versa, thus throwing the seeker after truth off the track. Lastly, the advice of the dying Oxford scholar, "Verify your references," should never be forgotten. One will then learn to what extent an error may be copied from one textbook to another, becoming disfigured on the way till the original fact or statement is unrecognizable. Every bibliographical searcher at all thorough in his work must have had this experience. It reminds one of the famous example of derivation perpetrated, if we remember aright, by Ménage, who traced the name of Gradasso's horse Alfana (in Ariosto's *Orlando Furioso*) to *equus*. On this piece of perverted etymological ingenuity the following epigram was written:

Alfana vient d'*equus* sans doute
Mais il faut avouer aussi
Qu'il a bien changé en route.

THE BRITISH MEDICAL ASSOCIATION'S INSURANCE DEFENCE FUND.

OCCASION was taken last week to enter a strong protest against the assumption made in a paragraph of a circular recently issued to the profession by the Medical Federation Limited, which seemed to challenge the competence of the British Medical Association to administer the Insurance Defence Fund, to which members of the profession have voluntarily contributed, and which the contributors requested the Association to administer. We then stated emphatically that the Association is not under the legal disability suggested, but is competent to administer a voluntary fund such as that in question, having regard to the circumstances in which it has been raised. The matter, as was elsewhere reported, was considered by the State Sickness Insurance Committee at its first meeting, and that Committee decided to take counsel's opinion upon the point. This opinion was before the Committee at its second meeting, on Thursday last, and, as will be seen (p. 571) it entirely supports the protest made last week. The opinion is quite clear that there is no objection to the Association acting as administrator or trustee of a fund raised in the manner and for the purpose mentioned in the circular issued by the Association on July 17th, 1911, since that fund is raised by voluntary subscriptions from members of the medical profession generally, forms no part of the fund of the Association, and bears its own expenses of administration. The Association is not committing a breach of the conditions of its licence from the Board of Trade, and neither that Board nor any member of the Association could, as has been suggested on behalf of the Medical Federation, restrain the Association from so acting. So far, therefore, as the circular of the Medical Federation suggests that the fund so raised cannot lawfully be used to indemnify or compensate members of the profession, it is incorrect and misleading. The Medical Federation has been established by members of the Association belonging to the Bristol Division, acting, no doubt, with the best motives, but with an insufficient understanding of the position of the Association in relation to the Insurance Defence Fund. The Federation, it would appear, is appealing by its circular to all members of the profession, and those copies of its appeal which we have seen have been enclosed in an envelope bearing the name of the British Medical Association. This use of the name of the Association was not, we are advised, justified by the circumstances, and though Drs. Devis and Williamson defend the terms of the circular, its phraseology in other parts is so critical of the powers and achievements of the Association, that the use of the name of the Association is all the more inappropriate. We hope, therefore, that the Federation may see its way to reconsider its position, and to come to an understanding with the Association at an early date. Meanwhile the main point is established that the British Medical Association is undoubtedly in a position to receive further contributions to the National Insurance Fund, and to administer it. We believe that the profession generally will consider that it is the proper body to raise such a fund, and to ask the profession, as it does, for liberal subscriptions in order that it may be in a position to indemnify or compensate practitioners who shall suffer by reason of their loyalty to the profession in certain eventualities. It seems only too probable that such eventualities will arise, unless the National Insurance Commissioners, as we ventured to say last week, take a statesmanlike view of the position, and by their regulations, subsequently to be embodied in an amending Act, meet the extremely moderate demands which the profession has put forward.

SIR FREDERICK TREVES.

SIR FREDERICK TREVES has retired from the Army Medical Advisory Board and from the Nursing Board of Queen Alexandra's Imperial Military Nursing Service, upon both of which he has served since their formation eleven years ago as the result of the recommendations of Mr. Brodrick's two committees on the reorganization of the Army Medical Service and the Nursing Service respectively. Sir Frederick Treves was a member of both these committees, so that his connexion with the organization of medical aid for the army has been long and fruitful. He has indeed investigated the subject very fully in all its aspects, and has made himself personally acquainted not only with the military hospitals of this country, but with military hospitals in all parts of the world where British troops are stationed, with the minor exceptions, we believe, only of Mauritius and Bermuda. During the eleven years he has served on the Army Medical Advisory Board many remarkable changes and improvements have been brought about not only in the Royal Army Medical Corps, but in the Army Medical Service generally. Among these are the centralization scheme for military hospitals, the introduction into the army of what has been called the out-patient system, under which men suffering from slight injuries and ailments are treated in barracks, the establishment of the Royal Army Medical College at Millbank, the reconstruction of military hospitals generally on modern lines, and the grading of orderlies. Sir Frederick Treves is one of those exceptional men who have had the courage and decision of character to retire from active practice to devote themselves to public work while yet in full mental and physical vigour; he is having his reward in a very interesting after-career

during which he has already been able to render great services to the army and to the country. He retires from active work at the War Office now partly probably because he thinks he has served long enough—he was the only original member of the boards who had remained continuously in office. It is thought probable that Sir Anthony Bowlby, who is a member of the Executive Committee of the British Red Cross Society, will be Sir Frederick Treves's successor on the Army Medical Advisory Board. Sir Frederick Treves is also, we regret to learn, about to resign the post of Chairman of the Executive Committee of the British Red Cross Society. Though the work of that office will still call for incessant attention, the organization has been brought to a high pitch of perfection. As far as arrangements for invasion are concerned, the society had at the end of last month raised 1,110 voluntary aid detachments with a personnel of 32,527 trained and certificated persons, all of whom are registered at the War Office. The arrangements for a foreign war in which British troops would be engaged have been very fully worked out, and the plans for the storage and packing of material could be at once set in motion should the necessity arise. The fullest use has been made of the experiences of the Boer war, and the lessons it taught have been well learnt in respect of all that has to do with the prevention of disease in war and the care of the sick and wounded. Sir Frederick Treves retains his connexion with the Convalescent Home for Officers at Osborne, with the King Edward VII's Sanatorium at Midhurst, and with the Radium Institute in London.

TYPHOID INFECTION OF OVARIAN DERMOIDS.

TYPHOID fever is common and ovarian dermoids not rare so that coincidence is not unlikely, and infection of the contents of the dermoid cyst would seem highly probable. This is a grave question, as the presence of grease and hair in a dermoid is a source of danger in itself. If they escape into the peritoneal cavity, they are apt to become cultivating media for germs; whilst, if they are infected by germs when still inside the cyst that produced them, suppuration will be almost certain, and a suppurating dermoid, especially when adherent, involves great dangers, especially during operation. Were it not for adherent infected dermoids and certain malignant tumours, ovariotomy for new growths as a whole would be now one of the least dangerous operations in surgery. Dr. Krivsky,[1] of the Obuchoff Hospital for Women at St. Petersburg, publishes a full report of an instance in which suppuration occurred in an ovarian dermoid, the patient having suffered from an attack of typhoid fever eleven months previously. In the pus was found the typhoid bacillus quite distinct and actively motile. A cyst of the opposite ovary, containing fat and hair, was also removed, but no typhoid bacilli were found in its contents, though, like the fellow cyst, it was surrounded by adhesions. It lay in Douglas's pouch, where the *Bacillus coli* may enter from the rectum, but it is worth remembering that the typhoid cyst, as it may conveniently be called, lay above the brim of the pelvis, with numerous adhesions to small intestine. The clinical history is important. A woman, aged 39, had noticed a swelling in the left side for sixteen years, and it seemed at least certain that at her last confinement about four years previously there was a tumour, which did not interfere with labour. A severe attack of typhoid fever occurred in January, 1910. The tumour grew rapidly larger. In November, 1910, it was found to be hardly movable, whilst the cervix uteri was fixed. The periods had never reappeared since the attack of typhoid fever. There had been no rigors, and, strange, to say, the temperature was not above normal. The patient had sought relief because of the increase of the tumour, which caused pain, aggravated during micturition and defaecation. The operation was performed on November 29th, 1910, and the two dermoids removed. The infected cyst had developed in the left ovary; it contained much fat and hair mixed with grease. Great precautions were taken to prevent the entry of any of its contents into the peritoneal cavity. The dermoid of the right ovary was removed and Douglas's pouch drained with a rubber tube passed into the vagina and covered over with xeroform gauze. The abdominal wound was completely closed, yet pus escaped from a suture track on the fifteenth day. The opening in the posterior fornix was found to have closed and parametritic exudation could be defined. This complication subsiding after free escape of pus, the patient recovered. The bacteriologist will draw his own conclusions from this case. Its gynaecological aspect is of some interest. Krivsky notes that Pfannenstiel made out that 2 to 6 per cent. of ovarian cysts suppurated, principally dermoids. The *Bacillus coli*, streptococcus, gonococcus, pneumococcus, *Bacillus tuberculosis*, staphylococcus, *Bacillus typhosus*, certain saprophytes, and other germs, have all been found in the pus from these cysts. Gorinschin collected 43 cases of suppuration of ovarian dermoids more recently reported. In only one was the infection due to typhoid fever, but Werth has reported another. Last year Vignard of Nantes published a collection of 11 cases of suppuration of ovarian cysts after typhoid fever, including two in his own experience. Dermoids, it seems clear, are not specially liable to typhoid infection. In their earlier stages, when, in these days, they are nearly always extirpated, they are small and non-adherent. Later on, as has been noted above, they are sources of grave complications, especially infection. One remarkable feature in Krivsky's case was the absence of fever not only before but after the operation, though numerous intestinal adhesions had been detached from the infected ovary as well as from the non-infected cyst.

[1] Ein Fall von Typhusvereiterung eines Ovarialdermoids. *Monatsschr. f. Geb. u. Gyn.*, December, 1911, p. 696.

INSPECTION AND TREATMENT OF SCHOOL CHILDREN.

At page 574 of this issue will be found an account of an interview which took place recently between the Education Committee of the Barry Dock District Council and a deputation from the Cardiff Division of the British Medical Association. Quite independently of what may be the eventual outcome of the meeting, both parties seem entitled to congratulation in the matter—the committee for giving a courteous hearing to a deputation whose object was to indict one of its decisions, and the Division for having its views excellently expressed. The committee, moreover, is still further to be congratulated on the fact that it showed itself sufficiently open-minded to resolve that its previous decision must be reconsidered, despite the circumstance that it had already received twenty-five applications for appointment under the terms covered thereby. Those who have submitted their names as candidates will, no doubt, now consider whether it is not their duty to intimate to the Barry Council that in finally accepting or declining appointment they will be guided by the views of the local medical profession. The post in question was that of an officer whose duties would be not only to inspect children in the elementary schools, but also treat by operation and other means the eye, ear, nose, throat, and other complaints discovered among them, and, in addition, act as superintendent of the accident and isolation hospitals maintained by the District Council, and as medical officer of health to the docks authority. The arguments by which the deputation combated the view that this odd collocation of duties could be regarded as either scientifically legitimate or publicly desirable will be found described in some detail at the page quoted. They proved, as a member of the committee stated, "an eye-opener" to himself and many of his fellows, and threw what was for them a new light on the needs of the

situation. It need merely be added, therefore, that in endeavouring to persuade the Barry Council to keep the duties of inspection and treatment apart, the Cardiff Division is merely aiming at giving effect in a particular instance to a resolution at which the Representative Meeting of the British Medical Association had previously arrived. After a thorough consideration of the whole subject, the meeting concluded that if the interests of the children were to be adequately safeguarded and efficacy of treatment secured, the two duties must not be combined. Apart from this, the proposed schedule of duties at Barry included still further combinations of work, and the suggestion of the deputation that probably no man capable of fulfilling all of them well existed in the whole profession is sound; latter-day science does not lend itself to the production of Admirable Crichtons. The prospect of the question being finally settled in a desirable fashion seems at present decidedly good, for so far the committee has, like the Cardiff Division, shown an unprejudiced desire to rule its actions solely by considerations of public interest.

THE HEALTH OF THE COLLIER.

WHILST the evangels of fresh air and sunshine preach a gospel which finds a ready acceptance, we are confronted by the paradox that the health of the worker in the underground darkness of the coal mine is in important respects superior to that of his brother occupied above ground. The returns of the Registrar-General show that not only is the death-rate of the collier below the average—846 compared with 1,000 for all occupied males—but his susceptibility to phthisis is little more than half that of other males. Though his mortality from diseases of the respiratory system is above the average, his mortality from influenza, cancer, diseases of the nervous and circulatory systems, and Bright's disease is below the average standard, whilst the low death-rate from alcoholism, liver disease, and suicide, implies that as a class colliers do not drink to excess. Below the age of 20 and above that of 55 the death-rate of colliers is above the average, but if it were not for the heavy tale of accidents, the occupation of collier would rank amongst those with a low mortality. The death-rate of the collier is scarcely half that of the copper, tin, and lead miner. Apparently the efforts made to secure efficient ventilation and hygienic conditions in the dim caverns in which the miners toil have not been without result, and the decreasing mortality of the collier corroborates this view. Whilst the mortality of occupied males has fallen 16 per cent., that of the collier has dropped 21 per cent. The fatalities from accidents also are less. Writing in 1908, the Registrar-General said: "At each stage of life except that beyond the sixty-fifth year there has been a steady decline of mortality from accident since 1870–72." The deaths from fire-damp have shown a gratifying decrease. In the decade 1881–90 of every thousand accidental deaths in coal mines 151 were due to fire-damp; in the years 1900–2 only 66 out of each thousand were caused by fire-damp. Among occupations where risk of death from accident is great that of collier is fourth on the list. It surpassed the risk of accidental death incurred by the railway worker, but does not equal those undergone by seamen, bargemen, and fishermen. And this holds true although a colliery explosion may wipe out of existence a large number of men at one fell swoop.

EXPLOSIONS IN COAL MINES.

AT a meeting of the Manchester Geological and Mining Society, held in the Chemical Theatre of the Manchester University, Dr. J. Harger made some interesting suggestions bearing on the possible reduction that can be made in the percentage of oxygen in the air without rendering it unsuitable for respiration, and yet at the same time making it unfavourable to the occurrence of explosions in coal mines. He started from the statement that neither a candle nor an ordinary oil-lamp would burn in air containing 17 per cent. of oxygen, while a man could do continuous work in such an atmosphere without noticing any difference from ordinary air. No shortage of oxygen was noticed until the percentage was reduced to about 14 per cent., while at 12 per cent. it was very noticeable. Air with only 10 per cent. was dangerous, and with 7½ per cent. life was extinguished, just as a candle was at 17 per cent. The amount of carbonic acid was, of course, far more important, but his experiments showed that air containing 1 per cent. of carbonic acid and only 17 per cent. of oxygen was not unsuitable for human requirements, and, in fact, just as good as ordinary air, though such an atmosphere would not allow of explosions of coal dust. Dr. Harger therefore suggested that the air in mines should be artificially altered so as to contain too little oxygen to favour explosions, but sufficient not to interfere with respiration. He proposed to do this by mixing flue gases purified from all deleterious gases and smoke, in the proportion of 1 volume to 30 volumes of ordinary air, or, in the most dangerous mines, 1 volume to 15 volumes of air, and he thought this could be done with any simple plant without extra machinery. He said that with even 19 per cent. oxygen the danger of explosions would be reduced, but they could, if necessary in dangerous mines, reduce the oxygen to 17 per cent. without any injury to the miners. Considerable doubt was expressed by several speakers at the meeting as to whether in actual practice the reduction of oxygen might not be serious in the effects on men working for many hours at a stretch in such an atmosphere, and, as Mr. Gerrard, the chief inspector of mines for the Manchester district, said, Dr. Harger's suggestions upset all previous ideas as to the value of oxygen in air.

DIET AND INTELLECT.

WE had something to say last week about diet and intellect, and reference was made to the relation between literature and indigestion. By a coincidence we have come across in the *Journal des praticiens* of March 2nd an extract from Bergerat's *Souvenirs d'un Enfant de Paris*, in which an interesting account of the diet of Victor Hugo is given. Speaking of one evening when he dined with him, the poet being then 72 years old, he says: "Victor Hugo has the appetite of an ogre. . . . He eats like a mason of everything the whole time, and he empties his bottle. No coffee after the meal, but a small glass of rum, which he swallows at one gulp." We remember reading a description of Hugo at luncheon in his younger days: he piled all sorts of incongruous things on his plate, and almost rivalled the feat of "Father William" in *Alice in Wonderland*, who "swallowed the bird with the bones and the beak." Hugo's robust appetite may perhaps help to explain what Louis Veuillot called his *âme grossière et violente*. The writer in the *Journal des praticiens* says that vulgarity of ideas combined with a magnificent gift of lyric expression is his dominant feature. Nothing else is required to carry away the crowd. Nothing strikes the self-love of an ordinary reader like the talent of a writer who lavishly scatters about commonplaces clothed in a resplendent form. The public finds its daily thoughts set forth in the language of the gods. Childish truisms are proclaimed in the tone of an oracle. Commonness becomes depth, and a kiss given to a baby is a sublime act. The reader congratulates himself on understanding an author who describes common things as if they were of tremendous import; therefore he says with conviction, That man is a genius. Hugo handled a series of themes which each age from the beginning of civilization has passed on to the other, and to which he has added nothing original. Love, the evanescence of joy, the sweetness of remembrance, the agony of death, are the principal strings of his lyre. In politics he gives us sonorous

generalities about the great heart of the people, the wisdom of crowds, democracy, "progress," and so forth, besides a good deal of rancorous hatred of particular persons. But the lyre had golden strings, though it expressed nothing but the most ordinary sentiments and echoed the feelings and thoughts of every human being undeveloped by reflection and culture. It has been said that Hugo ate like a mason, and that figure expresses the truth. The materials on which he worked were without value in themselves, but well put together, cemented, and built into a solid monument. Too generous nourishment cripples the flight of thought. To acquire the gifts of subtlety, to conceive unsuspected relations—to be, in a word, a creator of new thought—it is necessary, according to the French writer, that one's diet should be spare, or, as he politely puts it, it is well, among those seated at a table, not to be the one who eats most. We suspect him, however, of a secret conviction that a really good writer should be dyspeptic. He cites the case of Joubert, who certainly was an exquisite writer, but left only a small volume of detached thoughts, subtle and suggestive indeed, but hardly entitling the author to a place among the elect of literature. Joubert was the exact opposite of Hugo; he ate very little, and was the victim of indigestion. These, however, are only particular instances. Genius is as little subject to rules in diet as in other things.

A GOOD ANIMAL.

A LECTURE was delivered at the Galton Eugenics Laboratory, University College, on March 5th, by Mr. N. Bishop Harman, F.R.C.S., who chose as the subject of his discourse the consideration of "Some Signs of Physical Degeneracy and their Lessons." After defining degeneracy as the falling off from or failure to attain a standard, he said that a standard of physical development was relative, not absolute; a high average of known attainment, and therefore variable. A race might advance or go back, but in the absence of accurate anthropological data extending over long periods it was almost impossible to determine the existence of a change or its character. It was therefore necessary to examine variation in details, in the growth of organs essential to the whole man, for indications of tendencies. Occurrences due to temporary causes must not be taken as indications of degeneracy, and since variations in particular organs must be the guides it was necessary also to guard against the assumption that the degeneration of an organ necessarily implied the degeneracy of the whole organism. For instance, to a monkey, man might appear degenerate, inasmuch as his tail was withered, yet the loss was in reality a gain, for the tail muscles had been promoted to a higher office, the guarding of the pelvic outlet, and without such a change the upright attitude would be an impossibility. Mr. Harman then proceeded to consider instances of defective development, particularly those which showed strong hereditary tendencies. The lessons of these kinds of physical degeneration, he remarked, could only be learnt when we knew the cause of the defect. Of particular causes we were ignorant, but in general it was proved that disturbance of the nutrition of the embryo was fruitful in the production of anomalies. Happily these sorts of defects were so rare that they could not be considered marks of degeneracy in the race. But there were signs of a steady degeneracy in two sets of organs vital to the well-being of the race, and the fall was marked amongst Western nations. There was good evidence that, coincident with the mental advance of man, there had been a diminution in the provision of teeth. In the ape, the negro, and the white man, brain and teeth were inversely proportional to efficiency. Increase of cunning had reduced the work of the teeth, and the demand of the brain for blood had starved the former; disorders of digestion showed that the balance was unsatisfactory. Worse than this was a degeneracy that threatened the future of the race at the very beginning of life. The evidence of physicians in England, America, France, and even Germany proved a growing disability on the part of white women to suckle their young. Part of this defect was undoubtedly due to external causes; but there was good ground for believing that the decline was a racial characteristic. It was time that the prophets of eugenics lifted up their voices and cried aloud against the evils of these things; for the loss was not only a loss to the infant at the most critical period—it was a moral loss to the entire race; and it was certain that a race of dry mothers would at no distant date be a race extinct. The moral of the whole matter could be summed up in the words of Herbert Spencer: "To be a good animal is the first requisite to success in life, and to be a nation of good animals is the first condition of national prosperity."

TRANSMISSION OF KALA-AZAR BY BUGS.

SIR RONALD ROSS informs us that he learns from Captain Patton, I.M.S., who has been deputed by the Government of Madras to carry out further investigations into the etiology of kala-azar, that he has been able by feeding *Cimex rotundatus* and *Cimex lectularius* on a case of kala-azar in whose blood there was a large number of parasites, to follow the parasite from its unchanged state in a leucocyte through the flagellate stage up to the rounding up of the parasite into its post-flagellate form, as was predicted in 1907 in the annual report of the King Institute for that year. If bugs, which already contained the developmental forms, were again fed on another case of kala-azar or on a monkey (*Macacus sinicus*), the flagellating forms were completely destroyed within eighty-four (? twenty-four) hours, whereas if the bugs were not fed again the development went on and was completed by the tenth, eleventh, and twelfth day after the single feed. This may explain why, in all the previous experiments, Captain Patton was not able to obtain massive infection of the bug or to get its complete life-history. The bugs were then repeatedly fed on the case and not kept long enough after their last feed. It further suggests an explanation why the disease does not readily spread outside the endemic area, as this material obstacle prevents many bugs from becoming infective. These recent observations appear to prove that in the European bed-bug (*Cimex lectularius*) the parasite goes through its complete development as readily as in *Cimex rotundatus*, and that by the seventh, eighth, and ninth day this bug swarms with the parasite in the flagellate stage in masses of rosettes. They make it probable that the parasite of infantile kala-azar, known now to occur along the Mediterranean littoral, also undergoes its development in *Cimex lectularius*. Captain Patton has further found that in *Conorrhinus rubrofasciatus*, the bug suspected by Donovan, and which was bred from the eggs and fed on the case, the parasite degenerates and never flagellates. It would seem, therefore, that this bug has nothing to do with the transmission of kala-azar. All the bugs used in these experiments were bred in the laboratory, and had their first feed on the case. *Cimex lectularius* was obtained from the slums of London. Like *Cimex rotundatus*, it never contains a flagellate. A memoir describing the observations, particularly of the post-flagellate stage, will shortly be published.

HOSPITAL APPOINTMENTS AND DISPENSING.

AT the annual meeting of the subscribers to the Royal Portsmouth Hospital on February 27th there came up for review among many other matters a recent decision of the governors, to which attention was drawn in the JOURNAL of January 13th. The governors had thought it well to annul an old rule of the institution to the effect that those appointed to the senior staff must be medical men not occupied in the conduct of dispensing practices. It

appeared to us that as this rule, though perhaps not one of a very common kind, had worked well at the institution for many years, and as it is better that those who take up surgical or medical appointments at hospitals should have as little of their time as possible taken up by unnecessary labour, the wisdom of the decision was open to question. It was at the same time suggested that if the primary purpose of the annulment was, as seemed to be the case, to enable the governors to retain the services of one particular member of the staff, it might have been better merely to waive it in his favour instead of abolishing it altogether. The same view seems to have been taken by the subscribers as a body, for at their meeting on the date mentioned they accepted by a very large majority a resolution having this effect. The principal plea put forward in opposition was that, as in one portion of the locality served by the Royal Portsmouth Hospital practically all medical men perforce dispensed their own medicines, the governors of the institution were unduly limited in their selection of candidates for appointment to the senior as opposed to the assistant staff. It does not seem, however, that in the past the rule in question ever proved any real obstacle to obtaining the services of men eminently fitted to serve as members of the senior staff of an institution of the importance which must always attach to the principal hospital of a locality such as Portsmouth, and as time goes on any theoretic difficulty of which the rule may be held to be the source, is likely rapidly to disappear. The Royal Portsmouth Hospital, therefore, seems entitled to congratulation, since it has preserved a rule which, despite its age, must certainly be regarded as harmonizing with the spirit and tendency of the present day, and at the same time has been enabled to retain and acknowledge by promotion the services of a medical man whose work while on the assistant staff left no doubt of its value.

A PUBLIC HEALTH DILEMMA AT CHICHESTER.

THE Council of the City of Chichester has for some little time been engaged in a distinctly difficult task, namely, that of endeavouring to fill the vacant post of medical officer of health in a fashion consistent with the somewhat varying views of itself, the ratepayers, and the Local Government Board. The value of the appointment is £150, made up of £125 salary as medical officer of health, and £25 as medical officer in charge of the isolation hospital, and its last occupant was a medical man in practice in the locality. He did not possess any special qualification in State medicine, and the Local Government Board, whose approval of his appointment does not seem to have been invited, made no contribution towards his pay. He fulfilled his duties, however, so much to the satisfaction of the local authority that when he recently resigned his office the council decided in favour of continuing the same system by filling the vacancy on precisely the same lines, and selected from among the seven or eight candidates Dr. Bostock of Chichester, whose appointment was announced in our issue for February 3rd. When this decision was reported to the Local Government Board, that body withheld its approval on two grounds: one being that the selected candidate did not possess a diploma in public health, and the other that apart from this fact it seemed highly desirable for various reasons that Chichester should take the opportunity of throwing in its lot with the Worthing combined sanitary area, and share with it a joint medical officer. A certain number of ratepayers also urged the council to qualify for a grant from the Local Government Board of half the agreed salary of the post by rescinding its previous decision and filling the vacancy by the appointment of a medical man in possession of a D.P.H. In one way and another, therefore, the council found itself practically obliged to reconsider matters, and accordingly held a meeting in committee last week. The net result was in effect an attempt to compromise between the wishes of the Local Government Board and those of ratepayers by rescinding the previous appointment, and substituting for Dr. Bostock a diplomate in public health, subject, of course, to final consideration of the matter by the council at its next public meeting. Meantime, two candidates were nominated, one being Dr. A. M. Barford, who was the second on the list at the previous election and the other Lieutenant-Colonel Elliot, a retired military officer, who was also on the original list of candidates and resides in Bognor. It was the former that the committee decided to recommend to the council for appointment, but as the voting was very close and several members of the council were not present, the final selection remains in doubt. Apart from this, the Local Government Board will still have to be consulted, and it is not improbable that it will maintain its recommendation in favour of Chichester entering the Worthing combination. The Dr. Barford in question resides in Chichester and holds appointment on the staff of its hospital and of the Portsmouth and South Hants Eye Infirmary, and also occupies the position of County Medical Officer to the Isle of Wight. He is, in fact, the medical man who accepted that appointment last year in the circumstances described in our issues for February 15th and March 25th last year.

THE KING has conferred the honour of knighthood upon Dr. W. M. Abbot Anderson, M.V.O., surgeon to the Princess Royal.

THE action of the St. Pancras Borough Council in applying for the addition of leprosy to the list of diseases compulsorily notifiable has caused some quite unnecessary apprehension in some quarters. That there are always a certain number of cases of the disease in this country is well known to all who take any interest in the subject, but there is no evidence that any of them have arisen in this country. Sir Jonathan Hutchinson has stated that no new case originating in England has been recorded or even suspected during the last two centuries. He adds that some fifty years ago he estimated the number at about fifty, and thinks there is no reason to believe that there are more, if so many, at the present time.

Medical Notes in Parliament.

Insurance Act.

Medical Commissioners.

THE MARQUESS OF TULLIBARDINE asked why the Medical Commissioners appointed under the provisions of Section 52 (1) of the National Insurance Act must have had personal experience of general practice; whether there was the same proviso with regard to the Scottish Medical Commissioner and, if not, would he say why a different course had been adopted; and whether the Scottish Medical Commissioners had experience of general practice. Mr. Masterman said, in reply, that Sections 57 and 80 of the Act required that all the Commissioners must have among their members a duly qualified medical Commissioner. In England only was experience of general practice a statutory condition of his appointment; but this condition, though not statutory, was also fulfilled by the Scottish Medical Commissioner, who had many years' experience.

Sick Benefits.

Mr. Meagher asked the Secretary to the Treasury whether, under the provisions of the National Insurance Act, the question of providing relief to sick insured persons would devolve upon the relieving officers of Ireland as well as upon the insurance officials; whether, having regard to the terms of the National Insurance Act as relate to the provision of sick benefits and to the proper supervision of cases, it would be necessary to have weekly inspection of cases; and, if so, whether, seeing that already under the Poor Laws provision was made for weekly supervision of sick cases as well as for immediate action on sudden cases which may arise, the Insurance Commissioners would

appoint Poor Law officers to the positions which might arise under the local committees which would have to be appointed; and whether, having regard to the number of local officers who would be required to safeguard the working of the National Insurance Act, and the cost which such working would entail in the payment of salaries to new officers, the Insurance Commissioners would follow the precedent of the Election Order and appoint Poor Law officers as local officers under the Act for persons other than members of approved societies. Mr. Masterman said that the answer to the first part of the question was in the negative; the rules as to sick visiting would be formed by the approved societies, or (as regards the deposit contributors) by the local insurance committees. With regard to the third and fourth part of the question, the officers of the local insurance committees would be appointed by those committees themselves, and not by the Commission.

National Health Commission.

Mr. Godfrey Locker-Lampson asked the Chancellor whether he had seen a circular letter from the National Insurance Commission stating that certain action had been taken by them in accordance with instructions received from him; whether it was to be understood that the Commissioners were in the position of ordinary Government Departments acting under the instructions of a Minister who took responsibility to Parliament for all their actions and decisions; and whether the Commission had therefore, before taking any important decision or action, to ascertain, and then to carry out, the views of the Chancellor of the Exchequer or the Secretary to the Treasury as the responsible Minister, and were not free to form and to act upon their own views as a Commission. Mr. Masterman said that the answer to the first part of the question was in the affirmative. The position as regards parliamentary responsibility for matter of administration was as stated in the latter part of the question.

Vaccination.

Exemption.

Mr. Stewart asked the President of the Local Government Board if he would state the number of exemptions granted against vaccination in 1908, 1909, 1910, and 1911 respectively; and the number of unvaccinated people in the United Kingdom, as far as could be estimated, at the present moment. Mr. Burns replied that the number of exemptions received by vaccination officers in England and Wales was as follows:

1908	162,799
1909	190,689
1910	230,947
1911 (first half)	119,335

There were no data upon which an estimate of the number of unvaccinated persons in the population could be made.

Ireland.

Mr. Cotton asked the President of the Local Government Board whether the lymph used in cases of vaccination in Ireland was taken from calves which were not afterwards slaughtered, while in England the same Board insisted upon lymph being taken from calves which were afterwards slaughtered and a *post-mortem* examination made with a view to seeing whether such calf or calves were affected with tuberculosis or otherwise. Mr. Birrell replied that the Local Government Board in Ireland, on the recommendation of their bacteriologist, had sanctioned the adoption of a system under which all calves used for lymph production at the National Vaccine Institute, Dublin, should be subjected to the tuberculin test instead of being slaughtered as formerly and a *post-mortem* examination held. It was considered that the new system would be less costly and more efficient, and that the tuberculous foci that might escape detection at autopsy would be at once revealed on application of the tuberculin test. The Board had arranged that the bacteriologist should personally supervise the processes and methods of tuberculin testing and see that they were carefully carried out in the case of every calf the lymph of which was to be used for vaccination purposes. The facts as regards England were correctly stated.

Vaccinations.

In reply to Mr. Touche, the President of the Local Government Board said that, owing to the variety in the fees paid to vaccination officers in different districts, he was not able to indicate the percentage reduction of the remuneration of these officers since 1907, but the number of vaccinations in England and Wales had declined from 695,147 in 1907 to 531,567 in 1910. He was endeavouring to deal with the cases of officers who had suffered serious pecuniary loss.

The "Exmouth."

Mr. Lansbury asked the President of the Local Government Board whether the action of the Metropolitan Asylums Board, in declining to receive boys recommended by the Southwark Board of Guardians on board the training ship *Exmouth* unless they had been vaccinated, had his sanction, seeing that this ignored conscientious objection, as recognized by law, and reinstated compulsion; and, if not, whether he would take steps to restore freedom of conscience to persons under the control of the Metropolitan Asylums Board. Mr. Burns said that he was advised that the Metropolitan Asylums Board had a discretion whether they would admit an unvaccinated boy to the ship.

Infant Mortality.

Mr. Pointer asked the President of the Local Government Board whether the recent material reduction in the vaccination of children, owing to the working of the Vaccination Act, 1907, had been accompanied by a corresponding decline in the death-rate of the infants in England and Wales to the extent of 30 per cent. in 1910 as compared with 1901. Mr. Burns replied that while expressing no opinion as to any connexion between the two phenomena, he might say the facts were as stated.

Tuberculosis (Committee of Inquiry).—Mr. Edward Wood asked whether any of the gentlemen appointed to the Committee of Inquiry into the problem of tuberculosis were professors of the veterinary profession; and, if not, whether, in view of the intimate connexion of the problems of human and animal tuberculosis, the Chancellor of the Exchequer could see his way to add such representation to the Committee. Mr. Lloyd George said that the answer to the first part of the question was in the negative. He would bring the hon. member's suggestion before the Chairman of the Committee.

Tuberculosis.—The Marquis of Tullibardine asked the Secretary for Scotland whether the Local Government Board proposed issuing an order in terms of Section 64 of the National Insurance Act before the Committee appointed to report upon the general policy in respect of the problem of tuberculosis had made their report. Mr. McKinnon Wood answered that the Local Government Board for Scotland was empowered by Section 64 to make orders for more than one purpose. It was not in contemplation to make orders dealing with the matters under consideration of the Committee referred to before the Committee had reported.

Sleeping Sickness.—Dr. Chapple asked whether additional evidence existed to show that game in Nyasaland was a reservoir, and *Glossina morsitans* a carrier, of the trypanosome of sleeping sickness; and whether, in view of the evidence so far available and the consequences of delay, fraught with peril to the natives, the whites, their domestic animals, and their trade, he would propose such a modification of the game laws as would enable those who suffered to drive off the game, and with it the tsetse fly, from the vicinity of the villages and transport routes. Mr. Harcourt replied that he was in consultation with expert advisers, the managing committee of the Sleeping Sickness Bureau, on the whole question, and he was not in a position to make any statement at present, but he could promise that there would be no avoidable delay. With regard to the latter part of the question, under Section 19 of the Nyasaland Game Ordinance, 1911, any landowner or his servant, finding a protected animal doing damage, might kill the same, and under Section 30 the Resident might authorize the tribesmen to kill animals, and any person could drive away game.

Infantile Mortality.—Viscount Wolmer asked the President of the Local Government Board whether he could state what was the rate of infantile mortality (children under 1 year) in England, France, Germany, Norway

Sweden, Denmark, Spain, Portugal, Italy, Austria, Russia, New Zealand, Australia, and Canada; and in which of these countries women exercised the municipal franchise. Mr. Burns replied that in most of the countries mentioned in the question the year 1909 was the most recent for which rates of infantile mortality were available. Owing to the wide fluctuations of infantile mortality from year to year, mainly owing to the varying nature of the summer seasons, comparison of the rates in different countries for different years might lead to erroneous conclusions. The rates for 1909 had therefore been stated where possible. For Spain, however, the rate was not available since 1907, for Austria since 1908 and for European Russia since 1904.

Country.	Year.	Deaths Under 1 to 1,000 Births.
England and Wales	1909	109
France	1909	120
German Empire	1909	170
Norway	1909	72
Sweden	1909	72
Denmark	1909	98
Spain	1907	158
Portugal (no information in General Register Office)	—	—
Italy	1909	155
Austria	1908	205
Russian (European)	1904	232
New Zealand	1909	62
Australia (Commonwealth of)	1909	72
Canada (Ontario, Province)	1909	131

The above rates of infantile mortality had been furnished to the Registrar-General by the authorities of the several countries. Comparison of them was, however, vitiated—in some cases probably to a considerable extent—by differences of practice in regard to the registration of still-births. His present information did not enable him to reply to the latter part of the question.

Anthrax.—Mr. Jowett asked whether another death had occurred from anthrax, contracted at the firm of Messrs. Campbell and Harrison, woolcombers, of Shipley, a branch of Woolcombers, Limited; and, if so, what he intended to do in the matter, having regard to the frequent loss of life from this cause at the firm in question. Mr. McKenna said he had received full reports of this case. The man was employed in card grinding—a process which was not dealt with in the regulations and which until recently had not been regarded as presenting specific danger of anthrax. It was evident, however, from the circumstances of this case that measures would be necessary for protecting the workers against any dangerous dust which might be given off during the process, and he was advised that the use of appliances similar to those now being generally installed in the carding rooms of Lancashire cotton mills should form an effective safeguard. Instructions would be given to the inspector to take up the matter at once with the firm in question. On a later day Mr. McKenna informed the House that he had asked the President of the Royal College of Physicians to nominate a gentleman to inquire into the subject.

Asylum Officers' Superannuation Bill.—Sir Charles Nicholson has introduced a bill to amend the Asylum Officers' Superannuation Act, 1909. It is backed by Colonel Lockwood, Mr. Crooks, Mr. Millar, Mr. Harris, and Mr. Nannetti, and the second reading fixed for March 7th.

Asylum Officers (Employment Pensions and Superannuation) Bill.—This bill, which must not be confounded with Sir Charles Nicholson's bill, has been introduced by Lord Wolmer, and deals with the hours of employment of officers and servants in asylums and proposes to amend the Asylum Officers Superannuation Act, 1909. It is strongly backed, and has been put down for second reading on Friday, April 19th.

The Abolition of Vivisection Bill was presented on Monday by Mr. Lansbury, who was supported in its introduction by Mr. Keir Hardie, Sir John Rolleston, Mr. Chancellor, Mr. W. Thorne, Mr. John Wilson, Mr. John Taylor, Mr. James Thomas, Colonel Lockwood, Mr. Snowden, and Mr. Albert Smith. The second reading was fixed for March 11th.

THE INSURANCE SCHEME.

STATE SICKNESS INSURANCE COMMITTEE.

Second Meeting.

THE second meeting of the State Sickness Insurance Committee appointed by the Special Representative Meeting on February 21st, was held on Thursday last, March 7th. As the JOURNAL has finally to be sent to press on that day we are able to report only the earliest part of the proceedings.

Mr. T. JENNER VERRALL was in the chair, and the members present were:—*England and Wales:* Dr. R. M. Beaton (London), Dr. John Brown (Bacup), Dr. T. M. Carter (Westbury-on-Trym), Dr. S. Hodgson (Salford), Dr. R. E. Howell (Middlesbrough), Miss Mary H. F. Ivens, M.S. (Liverpool), Dr. Constance E. Long (London), Dr. R. A. Lyster (Winchester), Dr. James Pearse (Trowbridge), Dr. E. O. Price (Bangor), Dr. Lauriston E. Shaw (London), Dr. Johnson Smyth (Bournemouth), Dr. D. F. Todd (Sunderland), Mr. E. B. Turner (London), Mr. T. Jenner Verrall (Bath), Dr. A. H. Williams (Harrow on the Hill), Mr. D. J. Williams, F.R.C.S. (Llanelly), Mr. E. H. Willock (Croydon). *Scotland:* Dr. J. Adams (Glasgow), Dr. Bruce Goff (Bothwell), Dr. R. McKenzie Johnston (Edinburgh). *Ireland:* Dr. F. W. Kidd (Dublin). *Ex officio:* Dr. E. J. Maclean, Chairman of Representative Meetings; Dr. J. A. Macdonald, Chairman of Council.

CO-OPTION.

It was announced that the Northern Association of Medical Women had nominated Miss Mary H. F. Ivens, M.S., and she was co-opted accordingly.

APOLOGIES FOR ABSENCE.

Apologies for absence for unavoidable reasons were read from the President, Professor Saundby; the Treasurer, Dr. E. Rayner; Dr. J. S. Darling (Lurgan), Mr. R. J. Johnstone (Belfast), Dr. Munro Moir (Inverness), Dr. D. G. Thomson (Thorpe, Norwich).

THE INSURANCE DEFENCE FUND OF THE BRITISH MEDICAL ASSOCIATION.

At the conclusion of the account of the proceedings of the first meeting of the State Sickness Insurance Committee, given in the JOURNAL of March 2nd, it was stated at page 511 that the action taken by the Medical Federation Limited, in issuing a circular to members of the profession, was raised, and that during the discussion it was pointed out that this circular contained a paragraph which might be interpreted as challenging the power of the British Medical Association to administer the Defence Fund in connexion with the Insurance scheme to which members of the profession had voluntarily contributed. The Solicitor made a statement in which he expressed the opinion that it was perfectly competent for the Association, acting as trustee for voluntary donors, to administer such fund for the purpose indicated by the donors. The Solicitor was instructed to obtain Counsel's opinion upon the point.

The matter was accordingly placed before Mr. Colquhoun Dill, whose opinion was reported to the meeting of the Committee on March 7th.

The circular headed "Insurance Defence Fund" issued by the British Medical Association on July 17th, 1911, and the circular marked "Private" issued by the Medical Federation Limited in February, 1912, were both submitted to Mr. Dill, and his attention was particularly directed to the following paragraph appearing in the last mentioned circular:

> It [the British Medical Association] can give no guarantee of protection to its members other than one conditional upon the support obtained by a voluntary subscription list, and a perusal of its memorandum will show that no power is reserved to use this fund to indemnify or compensate its members.

The following points with reference to the British Medical Association Insurance Defence Fund were also brought under Counsel's notice, namely:

(*a*) That the contributions to the fund were voluntarily made.

(*b*) That such fund was contributed to by members of the profession entirely independent of the fact of their being or not being members of the Association.

(*c*) That the fund was kept separate and distinct from the moneys of the Association.

(*d*) That all the expenses of working the fund were defrayed out of the moneys thus contributed.

(*e*) That the relationship of the Association to the fund was akin to that of a trusteeship.

Counsel was asked to advise whether the Association was under any legal disability in raising and administering the Insurance Defence Fund or was laying itself open to any peril or risk at the hands of the Board of Trade or otherwise, it being explained that the Medical Federation Limited had suggested that an injunction would lie against, or other restraining influence might be placed upon, the Association by way of legal inhibition in its proposed administration of the fund.

The following is a copy of Mr. Colquhoun Dill's opinion:

Opinion.

I have considered the circular as to this fund issued on the 17th July, 1911, and the circular issued in February, 1912, by the "Medical Federation Limited."

The purposes for which the fund was formed (as indicated in the circular of July, 1911) are in my opinion purposes directed to "the maintenance of the interests of the medical profession," which is one of the primary objects of the British Medical Association. Therefore, subject to the exception next referred to, the purposes indicated by the circular are within the powers of the Association, as stated in its Memorandum, and the Association is entitled to carry them into effect.

The exception is that so far as the purposes in question involve the payment of compensation to individuals the Association is precluded from applying its funds for those purposes.

But there is, in my opinion, no objection to the Association acting as administrator or trustee of a fund raised in the manner and for the purposes mentioned in the circular; for that fund is raised by voluntary subscriptions from members of the medical profession generally, and forms no part of the funds of the Association, and it bears its own expenses of administration.

In so acting, the Association is committing no breach of the conditions of the license of the Board of Trade, and, in my opinion, neither that Board nor any member of the Association could restrain the Association from so acting.

If the circular of the Medical Federation Limited is intended to suggest that the fund so raised cannot lawfully be used for indemnity or compensation, it is in my opinion incorrect and misleading.

I have treated the matter on the footing that the Association itself is administering the fund in question. I should, however, point out, that it is arguable that the trustees or administrators are the members of the Council, and that the Association as a corporate body is not acting in the matter at all, although the fund is raised under its auspices.

T. R. COLQUHOUN DILL.

Lincoln's Inn, 6th March, 1912.

The matter was discussed at some length, and it was decided to invite the Medical Federation to send representatives to the next meeting of the Committee in order to clear up the misapprehensions which existed as to the powers of the Association, and define the future relations of the British Medical Association to the Federation.

REPRESENTATION OF THE PROFESSION IN IRELAND ON THE JOINT ADVISORY COMMITTEE.

The ACTING MEDICAL SECRETARY reported that, in accordance with the instructions of the first meeting of the Committee, the following correspondence had taken place with the Secretary of the Joint Committee of Insurance Commissioners:

February 29th, 1912.

Sir,

Nominations for Advisory Committee.

The State Sickness Insurance Committee of the Association, acting for the Council, considered your invitation to the Association to nominate members for the Advisory Committee, and steps are being at once taken to secure suitable nominations.

In dealing with this matter the Committee felt that the restriction of medical members of the Advisory Committee to representatives of England, Scotland, and Wales was unfortunate, as presumably the Advisory Committee will proceed to lay down Regulations which will govern the future administration of medical benefit generally. Although the Irish Commissioners may otherwise direct it seems probable that medical benefit when provided in Ireland will be administered on lines similar to those laid down in the Regulations now to be considered. It appears to my Committee, therefore, that it is very desirable that there should be on the Advisory Committee some representatives of the general practitioners of Ireland, who, it is suggested, should be in addition to the number of twelve mentioned in your letter of the 26th inst. If this suggestion is approved the Association will be glad to put forward suitable names as representing the general practitioners of Ireland.

I am, Sir,
Yours faithfully,
(Signed) ALFRED COX,
Acting Medical Secretary.

The Secretary, Joint Committee,
National Health Insurance Commission,
Buckingham Gate, S.W.

National Health Insurance Joint Committee,
London, S.W.,
March 5th, 1912.

Sir,

The Joint Committee of the National Health Insurance Commissioners have considered your letter of the 29th ultimo, and take note that the British Medical Association proposes to avail itself of the offer of the Joint Committee to consider suggestions from the Association of names of medical men suitable for appointment as members of the Advisory Commiteee of the Joint Committee.

On the subject of the appointment of a medical practitioner or practitioners resident in Ireland as members of the Advisory Committee of the Joint Committee, I am to state that the reason for which the Joint Committee did not consider it necessary to include such practitioners was that medical benefit can only be given in Ireland as an additional benefit, and it would rest with the National Health Insurance Commissioners for Ireland, and not with the Joint Committee, to decide under subsection 9 of section 81 to what extent the Regulations adopted with regard to Great Britain should apply in Ireland.

Seeing, however, the desire expressed by the British Medical Association, the Joint Committee will be glad to consider suggestions of names of Irish medical practitioners with a view to the appointment of one or more practitioners as members of the Advisory Committee.

I am, Sir,
Your obedient Servant,
(Signed) W. J. BRAITHWAITE,
Secretary to the Joint Committee.

Alfred Cox, Esq., M.B., B.S.,
Acting Medical Secretary,
British Medical Association,
Strand, W.C.

LETTER TO INSURANCE COMMISSIONERS.

The ACTING MEDICAL SECRETARY reported that the letter settled by the Committee at its meeting on February 28th (BRITISH MEDICAL JOURNAL, March 2nd, p. 510) had been transmitted to the Joint Committee of Insurance Commissioners on February 29th, that its receipt had been acknowledged, but that no reply had been received.

(To be continued.)

OWING to the railway disorganization, the meeting of the Scottish Medical Insurance Council called for March 15th is postponed.

THE Honorary Secretaries of the Sunderland Division announce that Dr. Maclean, Chairman of Representative Meetings, will give an address on The National Insurance Act as Affecting the Medical Profession, at Sunderland, on Friday, March 22nd, at 4.30 p.m. The Annual Dinner will be held at the Grand Hotel at 7.15 on the same evening.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LONDON.

THE BOW INSTITUTION.

AN institution of a medical character, but somewhat novel purpose, was formally opened at Bow, E., on March 1st by Mr. Burns, in the presence of the Lord Mayor of the City of London. Occupying some five acres of ground, and originally built for use as a workhouse, it has been converted at an expense of about £15,000, into a building to receive from metropolitan and other unions adults who are in need of more nursing or special treatment than they would ordinarily receive in a workhouse, but not sufficiently ill to justify their treatment in an infirmary. The cost of treatment at infirmaries and sick asylums in different unions of the metropolis averages, it appears, 22s. 9d. per head per week, whereas in the "Bow Institution" it is anticipated that the cost will not exceed 12s. 6d. The place, which is capable of accommodating over 600 patients, is the property of the City of London guardians, who are engaging in this new enterprise as the result of a conference with the Local Government Board last year. Its existence and utilization will, it is estimated, not only prove of great benefit to individual members of the poorer classes, but mean a saving to London ratepayers of over £30,000 a year. Mr. Burns, when opening the building and eulogizing its establishment as a wise and economic step, had something to say also as to the future of Poor Law administration in London. The problem was how best to administer the public benevolence given by thirty-one boards of guardians in the metropolitan area to one hundred thousand men, women, and children in the course of a year. He was opposed to the creation for this purpose of new bodies, which would only complicate the problem and lead to extravagance; but the Local Government Board hoped from the multitude of newer counsellors to be able to obtain a little of the older wisdom to assist them in the work of centralizing, unifying, and simplifying the Poor Law administration of London. By linking up public with voluntary charities and private associations more good could be done than if each of these sections of charitable activity were allowed to work by itself. In this matter there was being rapidly evolved a scheme for united London which, without much expenditure but with local help, would enable them to grapple with many problems connected with London's destitution which had been hitherto untouched. The Metropolitan Asylums Board was fast becoming a central authority for dealing not merely with the insane and feeble-minded, but with certain phases of poverty and disease, and owing to the general improvement in public health during the past six years it had been found possible to utilize several of the institutions which they had on their hands for the treatment of sick children. Already by co-operation between the Local Government Board, Metropolitan Asylums Board, boards of guardians, voluntary charities, sanitary authorities, and county and borough councils, coupled with the granting of old age pensions and medical inspection of schools, disease had been sensibly diminished and many allied evils mitigated.

INSPECTION AND TREATMENT OF SCHOOL CHILDREN.

Proposed New Medical Treatment Centres.

At the meeting of the Education Committee of the London County Council on March 6th the Children's Care Committee reported that it had approved certain variations in the number of cases dealt with at the treatment centres controlled by committees of medical practitioners in Islington, St. Pancras, and Hackney. An offer had been considered from a voluntary committee, not wholly composed of medical practitioners, to establish an additional centre in Poplar for treatment on five afternoons a week upon the conditions proposed in respect of other centres. The committee had approved of arrangements with this local centre for twelve months, the number of children to be dealt with being 880 suffering from eye defects and 1,320 suffering from ear, nose, and throat ailments. The Metropolitan Hospital, Kingsland Road, was prepared to undertake the treatment of 500 eye cases and 500 ear, nose, and throat cases a year upon the terms usually offered by the Council, and the Care Committee had agreed to the inclusion of this hospital in the medical treatment scheme as likely to be of assistance in meeting the needs of Haggerston and South Islington. The committee had also accepted the offer of the authorities of St. Cecilia's Home, Commercial Road, Stepney, to arrange for the cleansing of verminous children and for the medical treatment of ailing children. Treatment would be provided for 440 cases (nose, ear, and throat ailments not requiring operations, and external eye diseases), and it would be given in two intercommunicating rooms. A doctor would attend on one half-day a week; his salary would be paid by the Council, and, if 440 cases were treated, the cost of the centre for treatment purposes only would be £104 a year.

The Reorganization of Medical Treatment.

In recommending the Council to ask the Board of Education to sanction these proposals, the Care Committee drew attention to the steps taken by the Council since the autumn of 1911, in accordance with the promise to the Board of Education, with a view to co-ordinating medical inspection and treatment, and to securing the efficiency of the treatment centres. Under the newly-proposed arrangements the following provisions were included:

1. The local committees had agreed that the doctors themselves who performed the work (instead of as heretofore their qualifications only) should be subject to the approval of the Council.
2. Arrangements for the attendance of a lay officer or a nurse to supply information to School Care Committees as to the nature of treatment ordered by the doctors were now in operation at all the existing centres, and it was proposed to extend them to suggested centres.
3. The school doctors and the doctors at the centres would exchange information.
4. The adoption of the proposals now made would give the Council experience of providing treatment at three types of centre, namely, at hospitals, at centres established by local practitioners, and at centres provided by committees which were not composed of medical practitioners.

The committee felt that the Board of Education should be informed of these points and also of the experiment approved at the end of 1911, and put into force on March 1st this year, in the East End of London, in carrying out medical inspection by full-time officers under the supervision of a divisional medical officer, who would work in close co-operation with the Council's officers at the treatment centres. The Board should be asked to sanction the establishment of the proposed additional centres as a matter of urgency, inasmuch as there was special need for the treatment of children in the districts which would be served by the centres. A comprehensive report on the work of medical treatment in London generally would be submitted in October next. The total expenditure involved in the present proposals was £3,565 a year for treatment, and £475 in the first year for apparatus.

The Education Committee decided to send a letter in the foregoing terms to the Board of Education.

Medical Inspection Requirements Satisfied.

The Council has received the following letter from the Board of Education, dated February 21st:

Sir,—With reference to Sir Laurence Gomme's letter of December 12th last, I am directed by the Board of Education to state that, under the code of regulations for public elementary schools, 1909, as modified by the minute of the Board of Education, dated June 25th, 1910, they are satisfied that provision has been made by the local education authority for the medical inspection of children attending the public elementary schools within the area of the authority for the year ending on July 31st, 1912.—I am, etc.,

(Signed) GEORGE NEWMAN.

DEPUTY MEDICAL OFFICER OF HEALTH.

The London County Council, on March 5th, approved the appointment of Dr. William Butler to be deputy medical officer of health and deputy school medical officer, as recommended by the Establishment Committee (BRITISH MEDICAL JOURNAL, March 2nd, p. 514).

MANCHESTER AND DISTRICT.

THE MANCHESTER ELECTION AND THE INSURANCE ACT.

IN the South Manchester parliamentary election campaign, in which Mr. P. K. Glazebrook (Conservative) defeated Sir Arthur Haworth (Liberal) the National Insurance Act was one of the principal topics discussed, and as the attitude of the medical profession was frequently alluded to by both candidates, the medical practitioners of the constituency, at a meeting held on Thursday week, decided to issue a manifesto drawing public attention to the effects of the Act on the medical profession in general and on the hospitals. The manifesto contained the following criticisms:

"(1) The Act will cause a very great extension of what is known as contract practice or club practice, which in itself is open to many and grave objections. (2) This extension under the conditions provided will be disastrous, and in many cases ruinous, to the great majority of members of the profession engaged in general practice. (3) The fact that medical practice would have to be conducted under such conditions will necessarily lead to haste and consequent want of care in the treatment of the sick. (4) The general hospitals, which at the present time do a great work in this country, will be financially crippled, while their resources will probably be increasingly taxed, as the tendency will be to invoke their aid in a large number of cases. (5) It will probably be impossible for the hospitals to be continued under the existing system, and some form of assistance from public funds will become necessary and will lead to great changes in their method of administration. (6) Under these circumstances, it is not to be expected that in the future they will be able to obtain an honorary staff as at present, and the relations of the latter to the public, the profession, and the teaching of medicine will be greatly altered. (7) Medical education and the study of medicine in this country will be gravely interfered with by the alteration in the working of the voluntary hospitals. In many cases, such as those of nurses and the employees of medical men and medical institutions, already receiving professional attendance free of charge, the so-called medical benefits under the Act will be wholly illusory. We consider that the Insurance Act was drafted without a full consideration of its relation to the medical profession and to the question of national health, of which the profession is best able to judge."

THE MANCHESTER AND SALFORD PROVIDENT DISPENSARY ASSOCIATION.

At the annual meeting of the Manchester and Salford Provident Dispensary Association, held on February 27th, Mr. J. B. Parkinson, who presided, said that the future of provident dispensaries was very uncertain, as they could hardly expect that persons who had to pay under the Insurance Act would continue to pay to the provident dispensaries for the same thing. As medical benefit would not come into operation at the earliest until January next year, they had still almost a year, and those persons who would come under the Act would be well advised to continue their membership of the dispensaries until they could receive medical benefit from the insurance scheme; after that the association would have to take advice, if necessary in co-operation with bodies in a similar position, as to whether there was any way in which contributions could be made to them either by Insurance Committees or other authorities to enable the provident dispensaries to continue to provide medical attendance for women and children—in most cases the wives and families of persons insured under the Act. The future was therefore uncertain, but he believed there was a prospect of something being done to enable the dispensaries to continue. He further pointed out that the percentage of applicants to the medical charities who were found on investigation to be ineligible for free treatment had fallen from 42 per cent. in 1875 to 4.58 per cent. in 1911, and he attributed this largely to the provident dispensaries, as they had assisted people without loss of independence to provide their own medical treatment without resort to charity.

Mr. Alfred Simpson said he was not without hope that the attitude of the doctors towards the Insurance Act would soon be materially modified. The dispensaries had proved that arrangements could be made with medical men which were quite satisfactory both to those who gave and to those who received.

SANATORIUM PROVISION FOR MANCHESTER.

The Sanitary Committee of the Manchester Corporation at its last meeting received a report from the Medical Officer of Health as to the manner in which the provision for cases of consumption will be effected by the National Insurance Act, and the committee intends to submit to the City Council reports by the Medical Officer of Health and the city architect in reference to a scheme for utilizing the Baguley Sanatorium as a sanatorium for cases of consumption instead of, as at present, for the treatment of cases of scarlet fever and diphtheria. It is understood that for these cases extra provision is being made at the Monsall Fever Hospital. A sanatorium for persons of the same class as those who will come under the Insurance Act is urgently needed, and it is thought that a considerable economy would be effected by this scheme in place of providing an entirely new sanatorium. The Sanitary Committee has reason to believe that the scheme would be approved by the Local Government Board, and would be eligible for a grant under Section 64 of the Insurance Act out of the amount of £1,500,000 which is provided by the Finance Act, 1911, dealing with sanatoriums. The City Council has recently formed a National Insurance Act Committee, of which Alderman Plummer has been appointed Chairman, and the Town Clerk has prepared, for the information of the committee, a report on the provisions of the Act which chiefly affect the Corporation.

BIRMINGHAM.

SIR THOMAS CHAVASSE.

THE General Hospital has suffered a great loss by the resignation of Sir Thomas Chavasse, the senior surgeon. He was appointed Assistant Surgeon to the hospital in November, 1878, and Honorary Surgeon in December, 1881, making altogether over thirty-three years' service to the institution. The following resolution was unanimously carried at a meeting of the Board of Management on March 1st:

> That this board has received with great regret the resignation of Sir Thomas Frederick Chavasse, and desires to record its high appreciation of the very able and courteous manner in which he has performed his duties of honorary surgeon to the hospital for the past thirty years, of the great skill and unwearied attention he has always devoted to the patients under his care, and of the interest he has at all times showed in the welfare of the institution generally. That the resignation of Sir Thomas Frederick Chavasse be accepted with great regret, and that in consideration of the eminent services of Sir Thomas Frederick Chavasse it be recommended to the next annual meeting of the governors that he be appointed consulting surgeon to this hospital.

A subcommittee was appointed to consider what steps should be taken to commemorate Sir Thomas's services to the hospital.

APPOINTMENTS AT THE GENERAL HOSPITAL.

Dr. Leonard Gregory Parsons, M.D., B.S.Lond., M.R.C.P.Lond., has been elected assistant physician to the General Hospital. He is honorary pathologist to the Queen's Hospital, assistant lecturer on pathology in the University, and physician to out-patients at the Children's Hospital. Mr. Ernest Wilson Hird and Mr. W. A. L. Holland have been appointed surgical casualty officers.

ASSOCIATION OF PUBLIC VACCINATORS OF ENGLAND AND WALES.

Annual Meeting.

The annual meeting of this Association was held at the Midland Hotel, Birmingham, on Friday, March 1st.

Hearty thanks were voted to Dr. A. E. Cope (London), the retiring president, for his services. Dr. A. H. Martin, J.P. (Evesham), was elected president for the ensuing year.

The report of the council and balance sheet for the past year were adopted. The finances were considered satisfactory, as the adverse balance at the beginning of the year was followed by a balance in hand at the close of the year.

After the formal business was concluded an address was given by Dr. Drury (Halifax) on some present aspects of the opposition to vaccination. He contended that the opposition to vaccination had been conducted for many years on lines most fierce and bitter by an organized and energetic body of eccentric individuals. The

medical profession had taken this opposition far too complacently, and much mischief had been done almost without let or hindrance. Vaccination itself had withstood the onslaught—indeed, the foundation on which it stood had been strengthened—but in the meantime vaccination as an institution had suffered. No Acts of Parliament had been administered with such laxity as the Vaccination Acts. The administration of the vaccination service should be linked with the great State preventive medicine service. At the time of the windfall to the Anti-vaccination League, in the shape of the Bell-Taylor legacy, there was little or no vitality in that organization. The large sum of money placed at the disposal of the league had galvanized the leaders, and had given a new lease of life to the league. The Antivaccination League could only be fought successfully by a counteracting league. The greatest weapon of defence in the hands of pro-vaccinists was the careful performance of vaccination. Each successful normal vaccination was an indisputable answer to many of the suggestions of the antivaccinator, and was a source of confidence to the frightened mother and her neighbours. Dr. Drury, in conclusion, referred to the so-called Leicester method. An interesting discussion followed, in which the President, Dr. Cope (London), Dr. Stansfield (Reading), Dr. Macartney (Gloucester), Dr. Pullar and Dr. Line (Birmingham), Dr. Bradshaw (Liverpool), Dr. Williams (Manchester), and others took part.

Annual Dinner.

In the evening the annual dinner took place at the Midland Hotel. Dr. Martin presided. After the usual loyal toasts the President proposed "The Association," to which Dr. Cope responded. "The Guests of the Association" was proposed by Dr. Drury.

Professor Saundby, in replying for the guests, thanked Dr. Drury for the kind way in which he had proposed the toast, and the Association for the invitation to him and to his fellow-guests, and he particularly desired to thank Mrs. Drury for the pleasure she had given them by her songs. He did not think there could be any difference of opinion as to the greatness of Edward Jenner, whose merit was recognized by all his contemporaries. He was undoubtedly the founder of preventive medicine, and so long as scientific medicine existed his name would be regarded as that of one of its heroes. Vaccination, however, like surgery, fell into some disrepute about the middle of last century owing to the neglect of what they now called aseptic precautions, and for this reason vaccinators owed a great debt of gratitude to Lord Lister, who had so lately passed away, for having taught them how to make this simple operation free from possible dangers.

Thanks to the exertions of Dr. E. J. Beards (Birmingham), at the head of a local committee, the proceedings of the whole day were most enjoyable and successful.

GAINSBOROUGH.

On March 2nd Bro. J. Horwood, Grand Master of the Nottingham Imperial Order of Oddfellows, and Brother Staten, the General Secretary, addressed a meeting of friendly society members at Gainsborough on National Insurance. The General Secretary discussed the provisions of the Act, and in reference to the medical profession, said the Chancellor had stated that if the doctors refused to work under the Act there was provision for ensuring the working of the Act without them. He strongly deprecated such a threat being made. It had put up the backs of the medical profession. If the doctors came to the friendly societies and said they wanted 8s. 6d., the societies were going to say that it was their own money at present, and the Act allowed them to say that they were not going to have any medical benefit. They would have the 6s. themselves and pay for the doctor when they utilized his services, and that might not be so often as under the other circumstances.

NEWCASTLE.

An address on the Insurance Act was delivered on March 1st by Dr. Rutter, who spoke particularly of the doctors' position under the Act. He pointed out that the Northumberland and Durham miners under their present medical benefit scheme allowed 6s. 6d. per head per year for boys, 13s. for single men, and 19s. 6d. for married men. This latter payment included attention to members of the family up to a certain age. This worked out at 8s. 6d. per head per annum. What the doctors were asking for under the Insurance Act was only this same sum of 8s. 6d. per head. Dr. Rutter also said that those persons who were engaged in casual labour were the class which most needed medical benefit, and, owing to their irregular employment, they were the most likely to fall into arrears of contributions and to lose the benefit of the medical treatment provided by the Act. The great difficulty under which the Act was labouring was the narrowness of the working margin, which was somewhere in the region of 9 or 11 per cent., and it was now generally considered that the Chancellor had underestimated the cost of the bill. As for the patient having free choice of a doctor, this was true to some extent. However, there were some patients who were always ill and whom no doctors wanted, and these would be parcelled out amongst the various doctors. These men would therefore have no free choice.

An interesting discussion followed, in the course of which it was stated that the teachers hoped that the Pensions Fund they already had would be considered sufficient provision for them, and that they would thus be able to escape the Act. Canon Hamar, who presided, said that no one knew quite how the Act would operate, and one great objection to it was that it would lead to endless litigation.

SOUTH WALES AND MONMOUTHSHIRE.

RESEARCH IN MENTAL DISEASE.

At its meeting last week the Visiting Committee of the Cardiff Mental Hospital passed a resolution expressing the opinion that it was desirable that State aid in the shape of grants should be sought for the prosecution of research in mental disorders, such grants to be distributed through the Lunacy Commissioners, as was done in the case of research in public health through the Local Government Board. It was pointed out that such research might be expensive, and since it was of national and not merely of local importance, it was not considered reasonable that local authorities should find all the funds. The results of researches made with the aid of such grants could be published in the official reports of the Lunacy Commission. A further resolution was adopted instructing the Town Clerk to send a circular to the public asylums and registered hospitals of England and Wales with a view to ascertaining whether they were prepared to join in approaching the Commissioners in Lunacy in the matter, in order that the latter might make representations in the proper quarter.

THE BARRY SCHOOL MEDICAL OFFICERSHIP.

The Education Committee of the Barry District Council held a meeting on February 28th (1) to consider the applications—twenty-five in number—which had been submitted in response to the council's advertisement for a school medical officer, and (2) to receive a deputation on the subject of the terms of the proposed appointment from the Cardiff Division of the British Medical Association. According to the advertised requirements of the council, the person appointed must be prepared, in addition to undertaking the duty of school inspection, to attend to throat, nose, ear, and eye complaints in connexion with the school clinic, to perform operations and attend the local accident hospital (and eventually to become superintendent medical officer in connexion with accident, infectious diseases, and small-pox hospitals), and perform the duties of medical officer of health and medical officer to the port sanitary authority. Of the twenty-five candidates, two—namely, Dr. P. W. Kent and Dr. J. R. Draper—had cancelled their applications. The deputation, which was introduced by Dr. P. J. O'Donnell, a member of the Barry District Council, consisted of Drs. C. Lewis and Courtenay Millward (Secretaries of the Cardiff Division), Tenison Collins (Cardiff), and E. E. Brierley (Vice-Chairman of the Cardiff Division), with Dr. Rowland Fothergill, who attended as a representative of the central office of the British Medical Association.

The first speaker was Dr. Fothergill, who stated the arguments in favour of maintaining the existing practice

in Barry, namely, that of separating the inspection of school children from their treatment, and of entrusting the latter to private practitioners. Medical men engaged in private practice necessarily possessed wider experience in the treatment of disease than could a man whose duties were confined to school work. The general public also gained by children in the elementary schools being treated by private practitioners, for the experience of disease which such practitioners thus acquired was of advantage in treating corresponding disease in others than elementary school children. If, as seemed likely, the treatment of school children developed into a great national undertaking, its ultimate value would depend on inducing as many members of the medical profession as possible to take part therein. He also dwelt on the lack of elasticity arising from confinement of the work to a small number of public officials. Whole-time officers possessing the necessary ability and experience could not be obtained at low salaries, and education authorities would have to choose between economy and efficiency. Moreover, their appointment created vested interests. For instance, if the authority were dissatisfied with the results obtained and desired to change its system, serious difficulties would be entailed by the dismissal of a special staff. No such difficulties would arise if a number of part-time officers engaged in private practice were employed and the council could adjust the work to its exact requirements. The number of children who had required treatment such as the council proposed to afford during the past year appeared from the annual report to be 330. There were general practitioners in the town capable of affording each form of special treatment involved, and he suggested that the council should consider the question of arranging to pay a fee of 10s. 6d. for each such case, and to provide for eye work in the same way as had the London County Council—namely, by employing eye specialists to attend two and a half hours each week for an honorarium of £50 a year. Dr. Fothergill also answered a number of questions addressed to him on various points more or less connected with the subject.

Dr. Tenison Collins made some observations in reference to the applications that had been received. It seemed to him unreasonable for an authority to expect to be able to obtain the services of a man not only versed in public health work but also competent to take charge of the hospitals, operating therein and carrying out the various special treatments covered in the advertisement, and he doubted if anybody existed who could fulfil all the duties of such a post in a scientific fashion. As all present knew, he had been an operating surgeon for over twenty years, but he would not venture to operate on any part of the body outside his own particular sphere, or even to diagnose any affection of the eyes, ear, or throat. In these days of advanced surgery it took a man all his time to remain competent even in a single branch thereof.

Dr. Courtenay Millward expressed the opinion that if the council did fill the vacant appointment on the terms stated, it would find that the appointee only used the position as a stepping-stone to work elsewhere.

The final upshot was that the committee resolved by 16 votes to 6 to refer the question of the appointment of a school medical officer back to the subcommittee, with instructions to redraft the terms of the advertisement, and submit it at a future meeting.

The Cardiff Infirmary.

The annual meeting of governors of the Cardiff Infirmary (to be known in future as King Edward VII's Hospital) was held on February 28th, the Lord Mayor of Cardiff presiding. The seventy-fifth annual report was presented; a summary has already appeared in this JOURNAL. Reference was made to the effect of the Insurance Act on the subscriptions to charitable institutions, Dr. Paterson expressing the view that the experience of such measures in France and Germany was not to be taken as a guide. In those countries hospitals were State-aided, and the relation of the medical staffs to the hospitals was on a different footing. Colonel Vaughan referred to the change of name from Cardiff Infirmary to King Edward VII Hospital, and explained that this title had been granted by his present Majesty, as the money subscribed for the new wing was subscribed as a Cardiff memorial to King Edward. During the past year the sum of £45,000 had been contributed, the donations ranging from £6,000 to 6d. Colonel Vaughan made a strong appeal to the colliers and other workmen to increase their subscriptions materially. There is no doubt that the amounts collected from workmen are grossly inadequate in the districts about Cardiff. The total amounts last year were £1,900 from Cardiff, and about £2,600 from the colliery districts.

Newport Hospital.

The Mayor of Newport presided over the annual meeting of the Newport and Monmouthshire Hospital on February 27th. Much regret was expressed at the continued illness of Lord Tredegar, the president, and of Dr. Garrod Thomas, the chairman. The report showed that there were 1,388 in-patients and 9,148 out-patients treated during 1911. The income was £8,224 and the expenditure £8,466, making the total deficiency up to date £2,500.

Presentation to a Medical Man.

Dr. F. W. Evans, who has retired after thirty years' practice in Cardiff, was last week the recipient of a pony and carriage, subscribed for by his former patients. Dr. Evans, who was formerly physician to Cardiff Infirmary, has settled down in retirement in the South of England.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

National Insurance Act.

At a largely attended meeting of the medical profession, held in Waterford on February 21st, it was decided to organize all medical practitioners in the area of the South-Eastern of Ireland Branch of the British Medical Association, comprising the counties of Tipperary, Waterford, Carlow, and Kilkenny. After a lengthy discussion a temporary vigilance committee, consisting of ten medical practitioners resident in these counties, was appointed to use every possible means to ensure that no doctor in the country would make individual arrangements with insured persons, or societies, or clubs, not in accordance with the policy of the profession in their respective counties, and that all should sign the following pledge:

> I hereby undertake that I will not accept any club or other contract medical practice or position, except upon such terms as shall be approved by the County Medical Committee representing the entire profession of that county.

A few weeks ago we suggested that, as the result of associating itself with the National Insurance Act, the Women's National Health Association would run the risk of being accused of political or religious partisanship. It appears that this has already proved to be only too true. At the recent annual meeting of the Dublin Centre of the Ancient Order of Hibernians the President claimed for the Order the right to enrol all the Roman Catholic employees of the city, and charged the Countess of Aberdeen's Insurance Society with the use of "official influence in an unfair way" against the existing friendly societies. The Order, he said, "had certain firms under observation," with the object of ensuring that no pressure may be put on employees. "The Women's National Health Association claimed to be non-sectarian, but the majority of the societies which put forward this claim were in reality anti-Catholic." The Irish "organizers" and "lecturers" are travelling about the country, but the public have not been informed of their qualifications, and it does not appear that the instructions issued to the English lecturers are binding on their colleagues in Ireland, as a member of the Dublin Municipal Council and ex-Lord Mayor, an official lecturer to the Irish Insurance Commission, at a recent lecture, while stating that he was precluded from saying anything about politics, proceeded to dilate on the merits of Mr. Lloyd George's Budget.

The Commission on the Milk Supply.

The Viceregal Commission on the milk supply sat in Belfast to take evidence for several days. Dr. Robert Thomson, Chairman of the Public Health Committee, who was the first witness, explained the arrangements made for the inspection of the milk supply. The corporation

had a veterinarian to inspect the cows and cowsheds, and a dairy inspector. He complained of the inadequacy of the fines imposed by the magistrates in cases of successful prosecution. About one-third of the outbreaks of disease traced to milk came from dairies inside the city boundaries, and two-thirds from outside dairies; and there had been difficulty in procuring inspection of the latter. Milk purveyors ought to be licensed. A large number of tuberculous cows were brought from Dublin and slaughtered in Belfast; this unjustly raised their statistics.

Dr. Andrew Trimble, Chairman of the Children's Committee, complained that the working classes did not get an adequate supply of good milk. A good deal of condensed milk was used.

Dr. H. W. Bailie, Medical Superintendent Officer of Health, was of opinion that the conditions under which the milk was supplied could be considerably improved. Powers should be obtained to inspect outside dairies; he was in favour of the uniform application of the Dairies, Cowsheds, and Milkshops Order. In 1907 he advocated the licensing of the milk purveyor. Butter and buttermilk should come under the same regulations. With few exceptions, local purveyors were willing and anxious to carry out the regulations.

Mr. McBride, Inspector of Dairies and Cowsheds, said there had been many prosecutions during the year of persons milking with dirty hands. About 25 to 30 cowkeepers had gone out of business during the last five years owing to the conditions imposed. In one outside district 35 owners had refused to allow him to inspect the cowsheds.

Professor Symmers, Pathological Department, Queen's University, Belfast, said that from 1907 to 1710, inclusive, he had examined 519 samples of milk; of these, 273 came from the country and 246 from Belfast. Of the 519 samples, colon bacilli were found in some quantity in 32 (23 from country, and 9 from town). Samples to the number of 190 were examined for tubercle by injection into guinea-pigs. There was only one positive result, indicating that the dairy cows were unusually free from this disease. He believed there was a positive danger arising from the possibility of people being typhoid carriers, but it was too large a task at present to examine every one in the milk trade. Regarding diphtheria, there was a danger in the possibility of a person being a diphtheria carrier. He was not in favour of pasteurization or sterilization of milk. He was strongly impressed with the necessity of the local medical officer of health obtaining powers for inspecting outside dairies.

Mr. James A. Jordan, M.R.C.V.S., City Veterinarian, stated that there were in Belfast some 200 cowkeepers and some 3,400 cows; during this year he had not as yet found a single tuberculous udder; speaking generally, the cowsheds were good and the owners careful.

Mr. Gregg, M.R.C.V.S., said that cows at present were giving less milk than formerly; he attributed this to unsuitable breeding from shorthorn bulls.

Dr. Elizabeth Bell said she had been looking after the children in the babies' clubs under the National Health Association. In some cases the milk was bad and deficient in fat, so that the association gave free milk for a time, and then paid the difference between the prices; last year £66 was thus disbursed. The poor mothers appreciated the advantages, and last year there were 1,000 extra attendances. There should be a guaranteed milk, so that a poor woman would be ensured of getting good milk. In the slum area milk was often very poor and very dirty.

Numerous other witnesses, including some clergymen, from the districts and smaller towns surrounding Belfast, were examined, and many excellent suggestions regarding breeding, the inadvisability of breeding from shorthorn bulls, as it lessened the milk supply, the provision of suitable depôts at railway stations, and many other points, were made.

Royal Hospital for Incurables.

A special meeting of the Board of Governors of this hospital was held on February 27th to consider whether it was advisable, in the interests of the hospital, to proceed with the erection in the hospital grounds of the proposed new pavilion for tuberculous patients. After considerable discussion the following proposal was carried by a majority of the votes of the governors present:

> That it is not advisable, in the best interests of the hospital, to proceed with the proposed erection of a separate sanatorium or other building in the grounds of the hospital for the reception of patients suffering from pulmonary consumption.

This has put an end to the agitation in the neighbourhood of the hospital which has now been going on for about a year, and there is no doubt that if the scheme had been persisted in it would have alienated the sympathies of many of the staunchest supporters of the hospital. Especially at the present time, when all the hospitals of the country are approaching a crisis in their history caused by the Insurance Act, is it necessary to avoid the slightest friction between the hospitals and the public which supports them.

Royal National Hospital for Consumption.

The twentieth annual general meeting of the Royal National Hospital for Consumption for Ireland was held at the Royal College of Physicians on February 29th. The report stated that 436 patients were under treatment last year; of these 339 were discharged, 90 remained in the hospital on December 31st last, and 7 died during the year. The Chairman, in proposing the adoption of the report, said that the ordinary income was not sufficient to meet the ordinary expenditure, and that there were grave fears that the general public might reduce their subscriptions as the result of the Insurance Act; and that if this happened it would tend to neutralize any advantage the hospital might gain from the Act. A system of graduated labour for the patients had been introduced, and also treatment by tuberculin; but it would appear that the results so far pointed to no great advance upon the open-air treatment. It was a mistake to admit cases in an advanced stage of the disease, as more good would be done both to the patients themselves and also to the community if only cases still in an early stage were admitted. One of the members of the medical staff had been appointed to the Commission on Tuberculosis set up by the Government, but only as a representative of the Local Government Board, and he thought it a distinct grievance that no one had been appointed to represent the leading hospital for consumption in Ireland. Sir William Thompson, the Registrar-General for Ireland, said that before the eradication of consumption could be hoped for there must be linked together—first, preventive measures; secondly, tuberculosis dispensaries, as a means of discovering cases in the initial stage; thirdly, the sanatorium; and lastly, and most important of all, homes for advanced cases.

St. Patrick's Nurses' Home.

At the annual public meeting in connexion with St. Patrick's Nurses' Home in Dublin, Lord Plunket, whose mother started the first St. Patrick's Nurse some thirty-six years ago, said that the history of the home was one of steadily increasing usefulness. In 1892 five nurses paid over 16,000 visits; in 1902 fourteen nurses paid over 37,000 visits; and last year twelve nurses paid some 56,000 visits. There was room, he said, for more nurses in the home if the necessary subscription of £60 a year or a donation of £2,000 to the home for the permanent endowment of a nurse were provided. Dr. Robert H. Woods, President of the Royal College of Surgeons in Ireland, said that between the time a patient left hospital and the time he resumed work there was often a long period of convalescence, during which he needed skilled nursing, which was undertaken by the St. Patrick's Nurses. Though the average number of daily visits paid by each nurse was almost twenty, these were not by any means perfunctory, but represented real hard work.

Health of Belfast.

The death-rate for 1911 for Belfast was the lowest on record; a sudden and remarkable rise took place about the end of January. For the last week of that month the rate rose to 27 per 1,000 per annum; in the next week to 31, and in the succeeding week to 41; the average rate for the great towns of England during these weeks was 21.6. There were few cases of zymotic disease, but the mortality from chest diseases was appalling. A form of influenza raged not only in the town, but in the district. The death-rate in January was 17.9; in February, 30.8; deaths from respiratory diseases numbered 226, and from pneumonia 237; the corresponding figures for last year were 120 and 46.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

PRESENTATION TO DR. JOHN FRASER.

On Tuesday, February 27th, Dr. John Fraser, who recently retired from the position of one of the Lunacy Commissioners for Scotland, was presented with his portrait "in recognition of his long and useful service, devoted to the interests of the insane, and of his professional and public worth."

The presentation took place in the hall of the Royal College of Physicians of Edinburgh, and there was a large attendance. The Master of Polwarth, who was in the chair, observed that it was his good fortune during the whole time of his being Chairman of the Board of Lunacy—ten to eleven years—to have as his colleague Dr. Fraser. It would be out of place to enumerate any of the various changes which were introduced in lunacy administration during that time, but the advance which had been made to the high position which Scotland occupied in lunacy matters was largely due to the fact that their medical Commissioners always encouraged superintendents and asylum authorities to initiate experiments and to carry them out as they thought best, and, when they found the results successful, to use the great influence which they possessed to recommend the adoption of these methods in other places. He went on to speak of the kindly disposition of Dr. Fraser, and said the influence of that must have been great upon all concerned with the care of the insane in Scotland.

Sir Thomas Clouston, in making the presentation, referred to the career of Dr. Fraser. He was a distinguished student in the University, and was afterwards resident in the Royal Infirmary. He afterwards acted as Medical Superintendent of Fife and Kinross District Asylum for ten years. He was then appointed Deputy Commissioner in Lunacy, and later Commissioner. He then alluded to Dr. Fraser's work as Deputy Commissioner in carrying on the scheme begun by Sir Arthur Mitchell for the housing of insane patients in private buildings throughout the country—a scheme which had saved the country between £20,000 and £30,000 a year. The work of looking after the insane was one of great social and great scientific interest, and the men at the head of affairs for looking after the mentally afflicted required to be men with tact, sympathy, and great general social knowledge. Successive Governments had made a most wise selection of those who held these important offices. Insanity was unfortunately attended in the minds of the general public with a certain prejudice, even with a certain repulsion. It was the duty of everybody who had to do with the mentally afflicted to diminish that kind of handicap. Dr. Fraser, by his personal characteristics, helped to diminish the prejudice. When he retired, his friends to the number of about 200, thought something should be done to mark their appreciation of his services to the State, and the great benefit he had been to the mentally afflicted, and to express their personal friendship. The portrait they were presenting represented friendship and comradeship in every part of the world.

Dr. Fraser acknowledged the presentation of the portrait, which is an excellent work by Mr. Fiddes Watt, A.R.S.A., giving a three-quarter length picture of Dr. Fraser.

CAMERON LECTURE BY PROFESSOR SIMON FLEXNER.

Professor Simon Flexner, of the Rockefeller Institute of New York, Cameron Prizeman in Therapeutics of the University of Edinburgh, gave a lecture in the McEwan Hall of the University, on March 4th, on "Specific Local Therapeutics of Infections, with particular reference to Epidemic Meningitis." Principal Sir William Turner was in the chair, and there was a large attendance of members of the Senatus, of the medical profession, of students, and the public.

Sir William Turner said that the Cameron Prize recently awarded to Professor Flexner by the Senatus Academicus of the University of Edinburgh was founded in 1878 by Dr. Cameron, of New South Wales. Its object was to encourage research and discovery in practical therapeutics. In the thirty-five years since its foundation the prize had been awarded fifteen times, including the present award. Pasteur was the first to receive it, and Lord Lister the second. Since that time a procession of distinguished men, chosen as representative men in the subject—it did not matter where they came from as long as they were representative men—had been their Cameron lecturers. Dr. Flexner throughout his career had distinguished himself by his important researches in bacteriology and pathology, and in the study of those infectious diseases which were generally propagated by bacteria.

Dr. Flexner, who was most cordially received, said the subject of the address related to the local specific treatment of infectious diseases, and especially to the treatment of epidemic cerebro-spinal meningitis. The lecturer described the steps by which the antimeningitis serum was discovered and the essential part played in the discovery by the experimental production of epidemic meningitis in monkeys. Thus it was that a test of the serum, equivalent to testing it on man, was rendered feasible; and through this test it was ascertained that it was only when the serum was introduced directly into the inflamed membranes about the brain and spinal cord that it produced its peculiar and specific effects. He described how, after the first successful employment of the serum in the United States in Ohio and elsewhere, during the prevalence of an epidemic, it was sent to Dr. Ker, of the Edinburgh City Hospital, and Dr. W. Robbin, Belfast; after its successful employment in these places, it was offered by the Rockefeller Institute for Medical Research to the world. It had now been employed in many European and Far Eastern, as well as Western, countries. Reports on its use, numbering many hundreds, received from hospitals in many countries, had been analysed, and it appeared that, whereas the average fatality was from 70 to 90 per cent., the fatality of the treated cases by the serum varied from 15 to 25 per cent. The disease in infants was almost always fatal; but now as many infants survived as adults. Moreover, the crippling effects of the disease—except deafness, which might still occur—such as idiocy, paralysis, and blindness, were now nearly unknown. The lecturer then went on to apply the principle of local specific treatment to other kinds of infections of the cerebro-spinal membranes and other parts of the body.

THE ASSOCIATION FOR THE PROMOTION OF THE REGISTRATION OF NURSES, IN SCOTLAND.

The annual meeting of the members of the Association for the Promotion of the Registration of Nurses in Scotland was held on February 27th in the Gartshore Hall, George Street, Edinburgh, when a large and representative gathering of the medical and nursing professions of Scotland attended.

The chair was occupied by Lord Inverclyde, the President of the association, who said that it was very gratifying to see so large an attendance, as it showed that the interest in the association was equally large. The chief object of the association was to promote a bill for the registration of nurses, and, owing to the efforts of the association, they were able, conjointly with the English and Irish associations, to agree upon the terms of a bill which was printed and brought forward in the House of Commons. Unfortunately, owing to the pressure of other business last session, the bill was not considered. It was proposed to introduce it again into the House of Commons, and there was every hope that it would receive considerable support.

The Honorary Secretary (Dr. Mackintosh) then read his report, which stated that no progress had been made since the last annual meeting with regard to the bill for the registration of nurses on account of the National Insurance Bill taking up the whole time of Parliament. He continued as follows:

> It is gratifying to report that 179 nurses have joined the association during the year, showing that the interest in the work of the association is steadily increasing. The total membership is now 2,270. The passing of the National Insurance Act makes it more necessary than ever that nurses should interest themselves in any legislation which is likely to affect them, either financially or in status, and in order that nurses may appreciate the full meaning of the National Insurance Act as it affects them, in so far as it can be interpreted at the present time, Mr. Dick, the Secretary to the Royal National Pension Fund for Nurses, who is with us to-day, will explain fully in what respect the National Insurance Act will affect nurses, and how they can make arrangements to adequately protect their interests.
>
> The Royal National Pension Fund for Nurses proposes to form a separate section of the fund which will be open to all

women nurses whether members of the pension fund or not. Although the Royal National Pension Fund has no direct connexion with this association, it was thought that this was an excellent opportunity for nurses becoming informed of the provisions of the National Insurance Act as it affects them, seeing there are nurses present from various parts of the country and from the large centres. This is the first occasion, so far as I am aware, that the question has been explained to the nurses in Scotland, and it was thought well to take this early opportunity of placing the matter before them, in order that they may decide whether or not they will join a society which deals specially with their own requirements before the Act comes into force.

The Honorary Treasurer (Dr. J. McCubbin Johnston) submitted the financial statement, showing a balance of £43 13s. 9d.

Dr. Barbour, who moved the adoption of the report, began his remarks with an appropriate simile of three persons who only saw their own side of a three-sided object, but from a higher vantage ground they latterly saw not only their own side but the other two sides. He was not quite sure whether he was describing quite accurately what had occurred during the past two or three years in connexion with the Bill for the Registration of Nurses, and whether the standpoint of Wales did not come in as well as England, Scotland, and Ireland. They had now reached the important point that, instead of having three rolls for the three sections of Great Britain and three bills to go through Parliament, they had now got the satisfaction of having one bill in progress. No bill was ever got through without a great deal of pushing, and he was glad to see an increase in the size of the association, for every nurse would require to put her shoulder to the bill. Parliament expected, and reasonably expected, that when an important movement was on foot there should not only be unanimity on the part of those who were pressing for it, but that expression should be given to a large body of opinion. He was a recent convert to the desirability of registration, his doubt having been that while registration secured professional efficiency it could do nothing to secure what was equally important—the character of the nurse. A great advantage of registration was that it created a standard of efficiency, and the public knew what it was getting when it asked for a registered nurse. The scheme had an advantage, so far as he understood it, over the Midwives Act in this respect—that there would be no prosecution for inefficiency. Again, so far as he understood it, nurses might register or they might not. It did not affect the freedom of the individual. He thought everything that brought them together, everything that did away with the idea of isolation and self-sufficiency, was good, but, of course, they must keep their own individuality as far as possible.

Miss Gill, who seconded, said that all would be glad if the prospects of getting a bill passed were more hopeful, but meantime urged all members to keep the subject well in view. If nurses showed a continued interest and a real desire for a measure of registration, and if the members of Parliament who had helped them in the past, and the honorary officers of the association continued to give their help, success must come in the end.

The report was adopted.

Mr. J. Duncan Miller, M.P., spoke in support of the principles of the Registration Bill, which, he said, was creating a great deal of interest in the country and in the House of Commons. He had been asked to back it this year, and he would be glad to take the place of his late colleague, Sir James Gibson, who did so much to advance their interests. If a bill was to be got through the House of Commons it was necessary to keep agitating and moving. A most important matter to keep in view was that so long as the bill was a private members' bill the House of Commons must be shown that the opposition was either unfounded or could be readily and easily overcome. So long as the bill happened to be a private bill it could be blocked night after night in the House of Commons. It ought to be possible to discuss the matter with the opponents and show them that the feeling in the country was so strong and the course so sound that they ought to give way, and that the bill should be got through as soon as possible. He should like to get the bill, so as to make it one of the most permanent memorials of Florence Nightingale's work. It would be very timely; the bill could be passed at the same time as the London memorial was established. It would make a uniform standard for all who were engaged in the profession. He thought this was a matter which ought to be taken up by the State at a very early moment. He was glad to find that Scotland was properly represented in the bill, and that the Scottish nurses were going to have their share in the representation of council. In pledging himself to advance the prospects of the bill, and hoping to be able to carry his Scottish colleagues and others, he said it was a bill that reflected no political or party bias. It was national, and ought to be regarded in that light. With regard to what Dr. Barbour said, he thought it went a little further in regard to those who might not come up to the standard or maintain the standard, and he quoted the section to show that the register which it was proposed to set up would be one which the medical profession and the public of this country would have absolute confidence in, and would be very much in the interests of the nurses themselves.

Mr. Duncan Miller was cordially thanked, on the motion of the Chairman.

The following motion was then carried:

> That the present Acting Secretary, Honorary Secretary, Honorary Treasurer, and the Executive Committee be appointed to watch the progress of the bill through Parliament, and take such action as they consider necessary in the interests of the members of the association.

Dr. Renton, speaking to the motion, said it was absolutely impossible to carry through any great movement without a certain number of workers. The gentlemen mentioned would feel greatly encouraged by what Dr. Duncan Miller had said. It would give them a feeling of security in going forward and doing all in their power to place their association on a firm footing and secure the bill they wanted.

Mr. Louis H. M. Dick, Secretary of the Royal National Pension Fund for Nurses, then explained the National Insurance scheme as it affected the nursing profession, and what provision nurses could make to protect their interests. An excellent summary of the Act on the points indicated was placed in the hands of the audience by Mr. Dick, and in supplementing the particulars given he proceeded on the assumption that under the Act nurses generally would come within the description of "employed contributors" as defined, and as such be subject to the compulsory provisions of the Act. The contributions, it was pointed out, would be 3d. per week by the nurse and 3d. by the employer, and if out of employment the whole of the contribution must be paid by the nurse. The "separate section" of the Royal National Pension Fund would be open to all women nurses, whether members of the fund or not. Men would not be eligible, whether nurses or not. It would not be carried on for profit, and its constitution would provide that its affairs would be subject to the absolute control of its members. Sickness benefit would not commence until the nurse had made payments for twenty-six weeks.

Sir James Affleck moved a vote of thanks to the Chairman, alluding to the warm sympathy he had always shown and the practical encouragement he had always given.

Lord Inverclyde's brief response brought the proceedings to an end.

Edinburgh Royal Infirmary.

At the weekly meeting of the managers on Monday, March 4th, John Eason, M.D., F.R.C.P.E., was appointed an Assistant Physician to the Royal Infirmary for five years as from April 1st next. There were seven candidates for the appointment.

The Recent Frost and the Glasgow Death-rate.

A report has been submitted by Dr. Chalmers, Medical Officer of Health for Glasgow, to the Health Committee of the Corporation as to the effect of the recent cold weather on the health of the city. Dr. Chalmers states that it rarely happens that an opportunity occurs of observing the effect on the death-rate of Glasgow of sustained low temperatures without the concomitant of fog, so that the experience of the fortnight ending February 10th was of some interest. In the first week of this period 340 deaths were registered, and in the second week 400, representing rates of 22.6 and 26.6 per 1,000 respectively. No rate at all comparable with this had occurred since 1909, when in the forty-eighth week it was 33 per 1,000. In the forty-seventh week of that year the mean temperature was 30.7°, and a precisely similar temperature was recorded in the first

week of the fortnight under review. But in the forty-seventh week of 1909 there was continuous and dense fog extending over several days, and only 4.6 hours sunshine; while in the week ending February 3rd thirteen hours of continuous sunshine were recorded. By contrast 547 deaths were registered in the forty-seventh week of 1909 against 400 for the week ending February 10th. During the 1909 fortnight the deaths from pulmonary diseases alone were equal to a rate of 14.2 per 1,000 living, and constituted 49 per cent. of the total deaths. In the fortnight in question they represented a rate of only 6.4, and formed 28 per cent. of the total deaths. The contrast might serve to illustrate the asphyxiating effect of fog when associated with continued low temperatures.

Correspondence.

LORD LISTER AND THE CATGUT LIGATURE.

SIR,—In his letter in the JOURNAL of March 2nd Dr. Fielding of Bournemouth says: "Although Sir Hector Cameron proves he was justified in using the date 1868, I do not agree that it was the correct date of Lord Lister's first successful catgut experiment." I am, however, quite content that Lord Lister in his writings does agree that it was.

The history of Lister's early experiments in making use of sterilized buried ligatures is as follows: On December 12th, 1867, he tied one of the carotid arteries of a horse with a piece of purse silk steeped in a strong watery solution of carbolic acid, the ends being cut short and the wound dressed antiseptically. I assisted him in the performance of that operation in the old Veterinary College, in Parliamentary Road, in this city. In six weeks the old horse was found lying dead one day in its loose box. Lister was confined to his house at the time with a bad cold; and that evening, at his request, I drove to the Veterinary College, taking with me a large supply of mackintosh cloths and old towels. I cut out the entire soft parts of one side of the animal's neck, and returned to Lister's house with the huge parcel of horse-meat, where we sat up till an early hour in the morning, while, with keen interest and hope, he made his first rough dissection of the part. This keen interest he would hardly have shown if he had satisfied himself nearly a year before, as Dr. Fielding wishes us to believe, by a successful experiment on the carotid artery of a calf, that carbolized catgut was thoroughly reliable as a buried ligature. More detailed and minute examination of the horse's carotid ligatured with silk subsequently confirmed him in the hope "that the antiseptic system would free the deligation of a large artery in its continuity of the two essential elements of danger to which it is now liable—namely, an unhealthy condition of the wound and secondary haemorrhage. Thus encouraged, I felt justified in carrying a similar practice into human surgery." (*The Collected Papers*, vol. ii, p. 65.)

This he did in the case of an old lady in whom he tied one of the external iliac arteries on January 30th, 1868, on account of inguinal aneurysm. I also assisted him on this occasion. Her progress and recovery were most satisfactory, but she died ten months afterwards from the bursting of an aortic aneurysm. On dissection of the artery ligatured ten months previously, Lister found appearances which shook his faith in this form of ligature. He even believed that he saw evidences of a potential abscess in the neighbourhood of the ligature, which was only partially absorbed. He therefore wrote:

> It is clear that if there is any chance of silk, though used antiseptically, giving rise, even in exceptional cases, to abscess in the vicinity of an artery tied with it, this is a serious objection to its employment; and as the near approach to suppuration in the present instance was undoubtedly occasioned by the persistent presence of the thread, the case, while interesting as affording evidence that silk is susceptible of absorption, suggests the expediency of substituting for that material some other substance which can be more readily taken up by the tissues. The use of "animal ligatures" of catgut, leather, or tendon, was long since tried and abandoned as unsatisfactory; but, after the experience which the antiseptic system has afforded of the disappearance, without suppuration, of large dead pieces of skin and other textures, there could be little doubt that threads of animal tissue, if applied antiseptically, would be similarly disposed of. . . . In order to put the antiseptic animal ligature fairly to the test, I made the following experiment: On December 31st, 1868, I tied the right carotid about the middle of the neck in a healthy calf a few days old, the animal being under chloroform. Ligatures of two different kinds were employed at an interval of about 1½ in., the sheath of the vessel being left undisturbed in the intervening part. The cardiac ligature was of home manufacture, composed of three strips of peritoneum from the small intestine of an ox, firmly twisted together into a threefold cord. The distal thread was of fine catgut, called "minnikin gut" by the London makers, etc. (*Collected Papers*, vol. ii, pp. 92 and 93).

This was done during his Christmas holiday at Upton, his father's residence near London. It was, of course, the first time that he had experimented with the catgut ligature.

> The surgeon, therefore, may now tie (he wrote) an arterial trunk in its continuity close to a large branch, secure alike against secondary haemorrhage and deep-seated suppuration—provided always that he has so studied the principles of the antiseptic system, and so carefully considered the details of the mode of dressing best adapted to the particular case in hand, that he can feel certain of avoiding putrefaction in the wound (*Collected Writings*, vol. ii, p. 98).

Dr. Fielding would, however, have us believe that he had made such an experiment on a calf early in 1867, and had referred to it in his class lectures at that time. I was then his class assistant and attended with complete regularity his lectures during that and subsequent winter sessions. Yet I heard nothing of experiments with catgut either in his lectures in 1867 or in my daily conversations with him subsequently, until, on returning from London in January, 1869, he told me what he had done while visiting his father at Upton during the Christmas holiday.

I am sorry to write at such length about what may seem to many a trivial matter; and I do so not with the view of disparaging Dr. Fielding's powers of memory, but really because I believe that historical accuracy regarding great surgical achievements is always of importance.—I am, etc.,

Glasgow, March 2nd. HECTOR C. CAMERON.

THE INSURANCE DEFENCE FUND.

SIR,—The article inserted under the above heading in the last issue of the JOURNAL would appear to call for some reply from us.

That article refers to a circular letter issued by the Medical Federation, Limited, as challenging the power of the "British Medical Association to administer the Defence Fund in connexion with the Insurance scheme, to which members of the profession have voluntarily contributed, and which they have requested the Association to administer," and goes on to state emphatically, "that the Association is not under the legal disability suggested, and that it is competent to administer a voluntary fund such as that in question, having regard to the circumstances under which it has been raised." We request, therefore, that in order to prevent any misconception arising as to the position, objects, and attitude of the Medical Federation, Limited, you will permit us to lay the following facts before the readers of the JOURNAL.

The Medical Federation, Limited, issues no challenge to the British Medical Association in any sense of the words indeed, as stated very distinctly in the Circular Letter above referred to, the Medical Federation, Limited, desire; to co-operate with the Association and to augment its power and influence by providing it with the additional powers and organization, which in the present crisis is so much required. Its purpose is not to weaken, but to strengthen the British Medical Association.

At the same time the promoters and members of the Medical Federation, Limited, being as they are most deeply interested in the welfare of the profession, and having studied very carefully and thoroughly the difficulties that surround it, cannot close their eyes to facts, and their policy is that of recognizing and of effectually combating all dangers and difficulties, rather than that of leaving them to be raised by those whose interests are opposed to the profession when it is too late.

They therefore, in the circular letter issued by them, stated that the British Medical Association "can give no guarantee of protection to its members other than one conditional upon the support obtained by a voluntary subscription list, and a perusal of its memorandum will show that no power is reserved to indemnify or compensate its members." This statement they still adhere to. It was made

after mature consideration, and in pursuance of eminent legal advice, and in the conviction that it is better to acknowledge the existence of a difficulty, and then to try and overcome it rather than to ignore it. It was because the promoters of the Medical Federation, Limited, were convinced that the powers reserved by the Memorandum of Association of the British Medical Association were totally insufficient to protect the interests of the profession in a crisis such as the present that they undertook the labour and expense of forming the Medical Federation, Limited, and in forming it they took every care that its objects should be sufficiently wide to enable it to act in the fullest interests of the profession.—We are, etc.,

GEO. SCOTT WILLIAMSON,
Managing Director.
H. F. DEVIS,
Secretary.

Medical Federation, Limited,
Lion Chambers, Broad Street,
Bristol, March 4th.

THE CHAIRMAN IN COMMITTEE OF THE REPRESENTATIVE MEETING.

SIR,—I was also present as a stranger in the gallery at Guildhall during the greater part of the Committee stage on February 20th and 21st, and I desire to endorse all that Mr. W. McAdam Eccles says in the JOURNAL of March 2nd regarding Mr. T. Jenner Verrall's chairmanship. His tact, urbanity, good temper, and absolute impartiality call for the highest praise from every member of the profession in this great crisis. I write as a former Representative and one who, although retired, still takes an active interest in the work of the Association.—I am, etc.,

ERNEST W. WHITE,
Emeritus Professor, King's College,
London.

London, S.W., March 4th.

THE PRESS AND THE REPRESENTATIVE MEETING.

SIR,—I was also an onlooker at the recent Representative Meeting at the Guildhall, and I fully endorse the remarks made by Dr. Sydney Jones and four other members of the British Medical Association. If the suggestion to clear the gallery had been carried I should have only left under protest. It is a pity that the Association has not a little more faith in its members.—I am, etc.,

London, W.C., March 1st. OSWALD CHALLIS.

SIR,—As an onlooker at the last Representative Meeting, and one who certainly never made, or thought of making, any communication to the press, I hasten to add my name to the disclaimer published in your last issue by several of those who were also present. If it is possible to deny an accusation of the kind "with fine scorn" on paper, I beg herewith to do so. Seeing that there were some two hundred men in the house, the Chairman of Council must have had some reason for making his accusation specifically against the mere handful who were present in the gallery. Can it be possible that he thinks that the moral integrity of one who chances to be a Representative is on a higher plane than that of one who is sufficiently keen to attend the meeting as an onlooker? I wonder if it has occurred to any one that it would save much time and trouble to concoct items for the press without attending the meeting at all. In future, onlookers had better apply for standing room on the floor, as their presence "in the gods" apparently entails loss of moral tone and their right to be treated as gentlemen.—I am, etc.,

C. COURTENAY LORD,
Honorary Secretary Rochester and Chatham Division, B.M.A.

Gillingham, March 5th.

THE PROFESSION AND THE POLITICIANS.

SIR,—Dr. F. J. Smith does not seem aware of the following facts:

1. The Queen's Hall meeting was at any rate partly organized in the Hammersmith Constitutional Club.

2. The stewards were obtained under the same auspices, and one, a well-known Unionist worker in Hammersmith (I know his name), was specially told off to *mark* Sir Victor Horsley. This no doubt is the gentleman Sir Victor refers to in his letter of February 20th.

3. It was freely stated before the meeting that Sir Victor was not to be heard. I myself was told by one member of the Committee "They will not hear Horsley." I have no knowledge of who "They" were, but such accurate foreknowledge is interesting, as also the fact that it was necessary to secure a large number of non-medical stewards.

4. Dr. Keay, who was sitting beside Sir Victor, was rushed at when he rose to speak by one of the stewards and forcibly pushed into his seat.

Comment is superfluous.—I am, etc.,

London, S.W., March 4th. H. BECKETT-OVERY.

SIR,—When the history of the Insurance Act comes to be written, no discredit can be attributed to the medical profession because its members differed acutely in their opinions. That, however, will be a dark page which records the fact that for the first time in England a section of the profession, regarded by the public as learned, resorted to rowdyism and vulgar abuse as a means of enforcing these opinions. Dr. Smith and his friends who originated the Queen's Hall meeting, have till now been for the most part silent as to the proceedings, but in his letter of last week he makes it plain that he quite approves of the action of the stewards and those who howled down Sir Victor Horsley. Who, by the way, were these stewards? They were not medical men, nor were they picked up casually in the street. For my own part I can only say that I was invited to attend that meeting, that it was thrown open to discussion, and that when I stood up and addressed the chair I was at once roughly pushed down in my seat. I have already stated this fact in the JOURNAL, and had partly expected that some excuse would have been made for the stewards. No excuse was made, and the reason is now evident, as Dr. Smith has made it quite plain from his letter that it was conduct of which he entirely approved.

Standing, as I afterwards did, several minutes on the platform, vainly endeavouring to be heard, I could plainly see that the hissing and hooting came mostly from a comparatively few men in three or four parts of the building. The great majority of those present sat silent. To myself it was evident that the Council had triumphed. I knew that the soul of the profession was sound, and that, however acutely many might differ from the Council, it was only a comparatively few who would care to associate themselves with men who were acting in a most discreditable manner. "Hiss away!" said the late Professor Blackie on a similar occasion; "I always know that I am right when I am hissed at." And so it has proved. Notwithstanding the fact that a considerable number of Divisions sent delegates in place of the Representatives they had themselves chosen, the Representative Meeting has practically endorsed the action of the Council. Their report was accepted and their recommendations but slightly altered. Though these resolutions were arrived at, it is at the same time quite plain that we have not yet reached smooth water, and it is useless to minimize the fact that there is still a wide difference of opinion as to the best means of gaining our points. In these circumstances, it must surely be evident that, if the Association is to gain its ends, in all future discussions there must be clear and cool deliberation, opponents must be treated with respect, and the Association must show its determination once for all to put an end to the rowdyism and personal abuse so unblushingly upheld by Dr. F. J. Smith.

One word more. Dr. Smith tells us that fear of the Government's defeat led to the Council's abandoning one after another of the six principles. I had sat a long time on the Insurance Committee, and it never occurred to me to inquire, nor, I daresay, did it to others, to what political party its members belonged. When the question was forced on us and inquiry was made, it was found that the Council and Insurance Committee were composed almost entirely of Unionists. And these were the men, Dr. Smith tells us, who were willing to sacrifice the welfare of their profession to uphold a Liberal Government! Could unreason go further?—I am, etc.,

Greenwich, March 4th. J. H. KEAY.

SIR,—As one who was present at the Queen's Hall meeting I can fully endorse all that Dr. Mondy says. The men did not want the time of the meeting wasted by Sir

Victor Horsley's repetitions. They had read his full and oft-repeated explanations both in the lay and medical press. With reference to the accusation that the heads of the profession made no attempt to secure freedom of speech, this is not quite accurate. I really thought the chairman would have had a seizure, so flushed and excited he became from his frantic efforts to secure Sir Victor a hearing. He cried out, or rather shouted, "Do hear Sir Victor! Do hear Sir Victor! Gentlemen, you are spoiling the meeting. You are not afraid to hear him." He did not say this once or twice, but shouted for three or four minutes on end.

Twice his efforts were successful, and he succeeded in getting absolute quiet. Sir Victor used the first occasion to make disparaging remarks upon the convener of the meeting. A more honourable, straightforward man than Dr. F. J. Smith it is impossible to find. The meeting was at once in an uproar. By long and persistent efforts the chairman secured the second opening for Sir Victor, who used this occasion to make sarcastic remarks upon the grammar of the resolution. Now the men whose very livelihood is threatened by this Act were not in the humour for this sort of quibbling, and they showed their resentment by loud and prolonged hissing and shouting, which only subsided when Sir Victor retired. All efforts of the chairman failed to get him a third hearing, but there was nothing political about it.—I am, etc.,

West Malling, Feb. 28th. G. BAYNTON FORGE.

THE POLITICS OF THE MEDICAL PROFESSION.

SIR,—The methods adopted by Mr. J. M. Robertson, M.P., in this discussion are, to say the least, somewhat peculiar; and I do not think they are calculated to improve his reputation. When he says that I have, in making my protest, justified him on the main issue, he is either blinking at facts or putting a construction upon my words which they do not bear. This cool assurance ("the badge of all his tribe") will not, however, carry him far.

Mr. Robertson states that the report of the *Newcastle Daily Journal* is certainly a good one, and not one which, had it been specially cited, he should have called "scrappy." But, as you state, it was this very report upon which the criticism was based; and if it be a very good one, as Mr. Robertson admits, I cannot for the life of me see how it was likely to mislead you, Sir, or give rise to "unwarranted cavils where readers are anxious to cavil." I will go beyond that, and say that the report in question omitted nothing that could have made Mr. Robertson's views clearer. As an experienced journalist Mr. Robertson will admit that it is quite possible to condense the report of a speech in a very drastic manner without exposing the speaker to unfair criticism; and I may point out that it is very rarely indeed that even the utterances of the most eminent statesmen and politicians escape condensation.

Mr. Robertson says the main issue raised by you against him was as to whether he asserted that the opposition of the doctors to the Insurance Act was *wholly* due to their Toryism. It is surely late in the day to introduce the word "wholly"; and I would point out that it was only after a strong protest on the part of many North Country doctors that the Parliamentary Secretary to the Board of Trade ventured to qualify his extravagant assertions. This he did in the following way: First, the doctors were bad politicians, Tariff Reformers, and Tories, hence their violent opposition; afterwards they were panic-stricken, and presumably out of their senses; and at a meeting held a little more than a week ago the doctors' opposition was ascribed to a fit of bad temper.

As to the assertion that my use of the term "extravagant assertion" merely raised the question of my own prejudice, let me state that in controversy it is not fair to attribute motives to one's opponent; but I may add that Mr. Robertson admitted the extravagance by subsequently modifying his views when he found it expedient to do so. Now, Sir, I do not know what other opinions on this subject Mr. Robertson holds, but it would simplify matters if he were to state them at once "in the lump." He has shifted his ground so often that one scarcely knows just where he stands.

My own view is that at the moment panic-stricken politicians are more in evidence than panicky doctors; and as for angry folk, I may be permitted to remark that Mr. Robertson has justified your criticism—"He evidently has the intolerance of the slightest criticism characteristic of politicians of his type"—or he would not have indulged in such violent outbursts as those which have appeared in your columns.

As for the prejudice which Mr. Robertson lays to my charge, I think it will be found that my letter was free from political bias. I did "nothing extenuate nor set down aught in malice." The letter, with the verbatim extract from my note, afforded Mr. Robertson an opportunity of effecting a graceful retreat from a somewhat undignified position; but if he prefers to flounder in a morass of his own making—well, I am content to leave him there.—I am, etc.,

Newcastle-on-Tyne, March 2nd. GRAEME M. ALLAN.

THE DEBATE ON THE INCOME LIMIT IN THE HOUSE OF COMMONS.

SIR,—I regret that Mr. Whitaker considers it necessary to imply personal animus on my part against himself. He has not the slightest grounds for stating that I "preferred to take the word of Dr. Helme, who knew nothing of the matter except on hearsay, to my statement, I having first-hand knowledge." I expressed no preference either for his or for Dr. Helme's statement, but simply said that in my opinion Dr. Helme's statement was justified in the circumstances. I do not agree that Dr. Helme's statement rested on hearsay evidence. That Mr. Whitaker's letter was not producible at the time is a fact. It is further a fact that Sir Henry Craik, who was present during the debate, had stated that, in his opinion, if a division had been taken on the £2 income limit it would have been a very close one. Sir Philip Magnus had said that he was much influenced by Mr. Whitaker's letter. Therefore I must maintain that Dr. Helme's statement rested on *facts* and not *hearsay*. In my letter I gave due weight to Mr. Whitaker's denial that what he wrote warranted Dr. Helme's suggestion, saying that this "somewhat altered the case," but I cannot admit that personal impressions of what has been written in a letter that cannot be produced preclude another from making reasonable deductions from undisputed facts. Dr. Helme, myself, and many others consider that a division should have been taken on the £2 income limit at all costs, and that the Executive of the Association should have insisted upon it. The copy of Mr. Whitaker's letter published in your issue for March 2nd proves that the writer, if he did not ask Sir Philip Magnus to withdraw his amendment, at least gave full permission, in the name of the profession, for this course to be taken; and Sir Philip Magnus, both in his original letter to the *Times* and in that published in the JOURNAL of March 2nd, emphasizes the fact that the "letter undoubtedly influenced me and others not to press my amendment to a division."—I am, etc.,

London, E.C., March 2nd. MAJOR GREENWOOD.

SIR JAMES BARR AND THE INSURANCE ACT.

SIR,—Sir James Barr, in his letter of February 24th, complains of being puzzled at the title of "Sir James Barr and the Insurance Act" over my letter in the JOURNAL of February 17th. As he himself initiated this discussion by his letter of December 30th, and continued it by a further letter on January 13th, he need not complain of my venturing to intrude a few remarks into the discussion after it had been well established under the above title. The question of racial decadence and the Insurance Act, on which such stress was laid by Sir James, was discussed in that letter of February 17th, so the title was hardly irrelevant. Perhaps a better title would have been "Eugenics and the Insurance Act," and it is interesting to note that the subject under this title has been taken up by the able medical sociologist, Dr. Saleeby.

Sir James infers that I am not a follower of Weismann, because I speak "of the difficulty of the problem dealing with the transmissibility of acquired characters," etc. Is this intended to be a reproach, and does Sir James Barr think that the problem dealing with the transmissibility of acquired characters is settled? If so, he is greatly in advance of those biological experimenters who are trying to elucidate the problem, and recent experiments have constrained even Weismann himself to modify his earlier conceptions.

It is hardly necessary to comment on his forcible reiteration of his antipathetic opinions on the Insurance Act. Time alone will show its effects, evil or good. With regard to the charge of misquotation from Professor Bateson's *Mendel's Principles of Heredity*, it is obvious to any one who compares the two passages given that there is no misquotation. The exact words and sense are given. In order to give the gist of the passage and to save space I simply quoted the second sentence of the passage, and put in, for the sake of clearness, the substantive phrase of the first sentence, which is governed by the demonstrative pronoun "these" of the second sentence. It is curious to note that this simple arrangement for economizing space should by his own confession inhibit Sir James's usual flow of forcible adjectives. The rest of the passage quoted simply amplifies the points I was trying to make in my letter of February 17th—namely, that so far as present knowledge went the phenomena of heredity in man were to a large extent uncertain and irregular, and that it was premature to express strong opinions on so flimsy a foundation.

The facts and the laws of heredity must be reckoned with in the sociology of the future, but I can hardly think that eugenics will advance much by the crude advocacy of Sir James Barr.—I am, etc.

Warrington, Feb. 25th. J. S. MANSON.

SIR,—After the letter of Sir James Barr, two of Dr. J. S. Manson's latest statements call for comment, and two only. The first is embodied in his words, "the *laissez faire* wisdom of that Chinese philosopher"—Lao-tzu—". . . is utterly opposed to a social theory based on Mendelism." If such a statement means anything at all it means that in Mendelism there is found some justification for the delusion of legislative interference which is the obsession of present-day statecraft. That such justification exists or anything remotely resembling it I can only here and now categorically deny.

Secondly, Dr. Manson is good enough—and I am proportionately grateful—to warn me against classification, and apparently resents quite strongly my endeavour to point out that mankind, like all other living races, is composed of two great natural divisions. I use the adjective "natural" for a definite and fairly obvious reason, inasmuch as the classification he objects to is, in fact, effected by natural selection and not by me. "Natural selection," says de Vries, "acts like a sieve." It separates, therefore, the fit from the unfit, the progressive from the degenerate, the intelligent from the less intelligent, and strews the path of progress with the bodies of those individuals whom Nature has destined for elimination, and Socialism, in its wisdom, for survival.

It is, therefore, not improbable that such a basis for practical legislation, embodying, as it does, a general principle which has absolutely no exception throughout the whole range of the organic kingdom, may quite well, as Dr. Manson suspects, prove a formidable barrier to the baseless and misleading speculation with which our present legislators attempt to justify their methods and aims.

Finally, I would point out to Dr. Manson that no stigma is attached to being "a lone voice in the wilderness," especially if the voice be the voice of truth.—I am, etc.,

Wood Green, N., Feb. 19th. A. RUGG GUNN.

*** Although under some obligation to receive a final reply from Sir James Barr should he consider it necessary, we do not feel that this correspondence can be usefully continued.

THE DECOMPOSITION OF CHLOROFORM.

SIR,—The question of danger to life from this cause has been well investigated. During the South African war Dr. Tunnicliffe, I believe, published in the *Journal of the R.A.M.C.* a careful research upon the effects of transport of chloroform from England to the base hospitals, and found no changes occurred in the drug. Messrs. Duncan and Flockhardt, I understand, have samples of chloroform which have been kept for years without any special precaution except exclusion of air and moisture, and these specimens when periodically tested reveal no change. I write from memory, as this matter came prominently before the profession when Pictet's chloroform was vaunted as safer than that prepared by other methods. Further, the records of the observed effects of chloroform which has undergone chemical change with the liberation of phosgene gas show that it is the anaesthetist, the surgeon, and the assistants who suffer more than the patient. When fatalities occur—and some few have been attributed to this impurity—the symptoms are respiratory, and resemble those incident to inhaling chlorine or other irritating vapours. If the impurity is present to such an extent as to produce respiratory spasm, no person administering the drug could avoid detecting it so soon as he had dropped any of the liquid on the mask. If the impurity is very small in quantity, the only result would be bronchial irritation and subsequent bronchitis. Under no circumstances do the symptoms coincide with those of sudden death under chloroform due to overdosage.—I am, etc.,

London, W., March 3rd. DUDLEY W. BUXTON.

ATROPINE AND OPEN ETHER ADMINISTRATION.

SIR,—I am greatly indebted to Mr. Stuart Ross, Instructor in Anaesthesia at the Royal Infirmary, Edinburgh, for his courteous letter commenting upon my article on "Atropine and Open Ether Administration" in the BRITISH MEDICAL JOURNAL for February 24th.

The expression of his opinion on several points is very welcome and interesting, but I do not agree with it. He thinks that the tongue-clip I use to maintain a free airway during ether anaesthesia must cause after-pain because the Edinburgh glossotilt sometimes does so, but these two appliances are different in their action. The tongue-clip has a single pin which passes through the tongue in one spot only near the tip, and its action is exactly similar to that of the tongue ligature which surgeons have used in jaw and palate operations for many years. Only a very gentle hold upon it is necessary to prevent the tongue from falling backwards. It has not in my hands caused after-pain, or I should not use it, nor have the patients had any knowledge that it has been applied.

On the other hand, a tractor on the base of the tongue causes pressure upon surrounding tissues, and I have seen it produce oedema of the larynx which necessitated tracheotomy in a case of enlarged glands on both sides of the neck.

I am thoroughly convinced that a mouth-prop inserted between the teeth or edentulous jaws before any kind of anaesthetic is administered is a most valuable method of retaining an adequate airway and is sufficient for this purpose until the paralysed tongue begins to cause respiratory obstruction. As this obstruction may supervene at any moment throughout anaesthesia, producing an asphyxial factor with laboured breathing, I think it better to prevent the possibility of its occurrence *ab initio* by regularly inserting the tongue-clip directly surgical anaesthesia has supervened.

Mr. Stuart Ross objects to the use of sixteen layers of gauze upon the open ether mask because in Edinburgh chloroform is often used to induce anaesthesia before the ether is added; but as this is a sequence of anaesthetics involving other risks, it requires quite separate consideration.

When I wrote of ether I meant ether, and I rather feel, if Mr. Stuart Ross will forgive the little joke, that another time when recommending the use of some mask or inhaler it would perhaps be better to indicate that it is not intended to hold porridge.—I am, etc.,

London, W., March 2nd. H. BELLAMY GARDNER.

THE NEW CELL PROLIFERANT.

SIR,—Mr. H. C. Ross has apparently not grasped the fact that when I spoke of stopping cell division in the ova of *Ascaris megalocephala* I was not referring to my own experience only, but to the experience of every one who has worked with this material, excepting evidently Mr. Ross. These ova are as unsuitable subjects for testing anything supposed to induce cell division as could be chosen. On the other hand, they supply one of the most easily demonstrated examples of the process of fertilization in the animal kingdom, so as Mr. Ross does not know whether the ova upon which his observations were made were fertilized or not, it is not apparent that he adopted the usual and necessary precaution of fixing some of the

material the rest of which he was going to examine in the living state. As it is common knowledge that these ova will continue to segment for many hours in such media as glacial acetic acid and formalin, the behaviour of Mr. Ross's experimental ova and controls means nothing one way or the other.

I do not see that Mr. Ross's remarks with regard to my personal conduct have anything whatever to do with the effect of his "auxetics" upon the eggs of *A. megalocephala*. His complaints with regard to "scientists" having disclaimed him and criticized him adversely seem to me equally irrelevant. As, however, in making these irrelevant remarks, he also makes definite charges against me, I am unwillingly obliged to take notice of them.

Referring to me, he says:

> A short time ago when I asked him for permission to reprint some of the excellent diagrams contained in one of his books . . . the only result was a most discourteous reply, containing a flat refusal.

I have never received any request from Mr. Ross. Nor have I ever written to him, courteously or discourteously. Some time ago I received a request from Mr. John Murray asking me to lend some illustrations to be used in a book which Mr. Ross was writing. Several letters upon the subject passed between Mr. Murray and myself, all of which were marked "Private." Circumstances were such that I could not give the required permission, but I suggested to Mr. Murray several other sources whence he could obtain far more authoritative drawings illustrating precisely the same details of cell division as those asked for from my book.

Mr. Ross complains of a review which I wrote for *Science Progress* of his book, *Induced Cell Reproduction and Cancer*. An honest criticism of observations and deductions therefrom, the validity of which depends upon the accuracy of equations in which cubic centimetres of solutions, minutes of time, and degrees of temperature are *added* together,[1] could hardly be other than scathing. Moreover, I took the trouble, before writing the review, to repeat several of the experiments by means of which Mr. Ross claimed to have induced mitoses. Appearances similar to those illustrated and described in his book were produced, but neither they nor the illustrations bore the most remote resemblance to mitotic divisions. They are readily explicable as the result of osmotic disturbances, and similar cytolytic results may be produced in the red blood corpuscles of triton, salamander, axolotl, and some other animals, by solutions of sugar of various strengths.—I am, etc.,

Glasgow, March 2nd. CHARLES WALKER.

SYMBIOSIS.

SIR,—I should like to thank Dr. McCulloch for his reference to the definition of symbiosis made by Dr. McFarland of Philadelphia, who, in my opinion, has undertaken an ambitious task in his book in trying to define this and kindred scientific terms in accordance with their derivations. He seems to take the word *symbiosis* in its literal sense as meaning that two creatures merely live together, and then he subdivides this into various forms, defining *parasitism* as a subdivision, and as essentially meaning that one creature is detrimental to the other. But I think that it is commonly accepted that symbiosis means more than merely "living together," for, in addition, it generally refers to two creatures which essentially are not harmful to one another. Had the word only meant "living together" then I believe that McFarland's arrangement would have been the right one. My object was not to attempt to make accurate literal definitions, but to try to straighten out the commonly accepted meanings of the words. Everyone has heard of the word "parasite," which conveys a general if not very accurately defined meaning, whereas the word "symbiont," which is not nearly so commonly used, generally means a harmless form of parasite. Therefore I suggested that the word "parasite" should be defined in the wider sense, so as to give us working grounds for stating whether a given cell is parasitic or not, and to keep the word "symbiosis" as a subdivision of it, maintaining as far as possible the commonly used meanings of both words. If we are now going to remodel the definitions of scientific terminology in accordance with its literal traduction, I think we shall be landed in a worse muddle than ever.—I am, etc.,

London, S.W., Feb. 27th. H. C. ROSS.

[1] *Induced Cell Reproduction and Cancer*. chap. v.

AS TO THE NATURE OF THE PARASITES OF LEPROSY AND TUBERCULOSIS.

SIR,—I accept Mr. Foulerton's explanation that he used the term "endogenous spores" in describing Streptothrix through an oversight. He admits I proved it was a very important oversight. I wish he had made some reference to his use of the same terms in describing Sporotrichum. (Sporothrix, besides being very confusing, is a mere laboratory corruption, and should never be allowed to displace a name known to botanists for one hundred years.) These organisms belong to the *Fungi imperfecti*, and throughout the entire group endogenous spores are unknown.

Streptothrix.—One now understands that this belongs to the Oospora, which are recognized, not by the French alone, but by botanists the world over. Recognizing that the organisms known to them as Discomyces, Nocardia, etc., are properly grouped under the name Oospora, the French bacteriologists discarded the old names and came into line with international botanical nomenclature. Jordan (*General Bacteriology*, 1909, p. 402) refuses to have anything to do with the name Streptothrix, and comments on the confusion of nomenclature. The only way to remedy the confusion is to follow the example of the French.

Sporotrichum.—I understood Mr. Foulerton to compare the streptococcal-like conidia of Streptothrix with the yeast-like conidia of Sporotrichum. In this I was wrong. The superfluous part of my letter was intended to convey that these yeast conidia are blastomycetes, and that blastomycetes have long since disappeared from textbooks of botany, because it is known that they are merely conidial forms, or, if Mr. Foulerton prefers it, pure cultures of spores. The classification of yeasts as blastomycetes is, therefore, obsolete, and there are practical advantages in regarding them as what they are, and not as what they appear to be. Naturally, one wonders why such a classification is still retained by bacteriologists alone. Recent work on the fission yeasts (Schizosaccharomycetes), together with the work for which Mr. Foulerton has justly gained a great reputation, indicates that in a few years our textbooks will be not of "bacteriology," but of "pathogenic mycology."

Hyphomycetes and Oospora.—Mr. Foulerton says I prove that what he describes "as Streptotricheae are Hyphomycetes, and that they belong to the genus Oospora." As a matter of fact, I did not use the term Hyphomycetes because bacteriologists employ it in a different sense to botanists. What I did prove was that if Mr. Foulerton's description was correct, his Streptothrix could not possibly belong to the Oospora.—I am, etc.,

London, W., March 3rd. ROBERT CRAIK, M.D.Glasg.

THE STUDY OF CONDUCT.

SIR,—It is highly necessary that Dr. Mercier should be put right on one point. Both in his letter (published on February 24th) and in a subsidiary correspondence, carried on between us on post-cards, he seems to think that I am intervening without invitation in this discussion. I assure him that my first letter of defence was prompted neither by his book nor by your reviewer's remarks thereon, but only by his first letter to you, in which he publicly imputed certain absurd views to a body of which I am an inconsiderable member, and therefore directly interested, and actually, though very slightly, aggrieved. Dr. Mercier, like Goliath, has been defying all and sundry, from Aristotle downwards, and can accuse no one of interference.

Dr. Mercier cannot get rid of a fallacy by calling it names, such as "quibble." In fact, this particular fallacy sticks to him more tightly than before. He admits that the disputed term, "classing," was mine, and he uses it, in spite of warning, in a different sense persistently—fallacy prepense, naked, and not half so ashamed as it ought to be. I am not sure now whether he has not laid himself open to an indictment for breach of a minor canon, the third minor canon of explication, which deals with "substitution" of terms. They call it, I believe, "passing off" at the Old Bailey.

Dr. Mercier proffers a reference to another work of his -*Sanity and Insanity*. Unfortunately, I have mislaid my copy of this, but in the search for it I have lighted on yet another—*Psychology, Normal and Morbid*. I cannot help thinking that he is not worldly wise in thus aiding his adversary—temporary, and for this and similar occasions only. His friend and proven exemplar, Job of Uz, sighed for one book, wherewith to confute his adversary. Dr. Mercier gives his critics three. These three I have with me—Psychology, Logic, and Conduct. In these books are to be found the following old bits of teaching: "Empirical or material reasoning is that on which conduct is founded. It is this reasoning which determines our action." "Conduct is action in pursuit of ends, and is composed of acts undertaken to attain ends." "Thought is nothing except as a basis of conduct." "Conduct is founded, not upon doubt and hesitation and suspension of judgement, but upon coherent belief." All of which would seem to show that in Dr. Mercier's opinion conduct has a pretty constant footing in mental process. I must therefore confess to feeling somewhat "matagrabolized" when, in my endeavours to master Dr. Mercier's ultimate conception of the conduct which he wants us to study, I read that in "treating, however, of conduct it is desirable to eliminate, as far as possible, reference to mental states and processes." When Dr. Mercier says that conduct is founded, etc., as above, does he imply that *all* conduct is so founded? If so, how can mental process be eliminated? If he means only *some* conduct is so founded, does it not necessarily follow that there must be two conducts, one essentially connected with mental states and processes, the other essentially disconnected therewith? It is true that he admits that total elimination is not always possible, but the connexion must be minimized. These little points need to be cleared up before one can undertake a profitable study, such as he says we do not think to be feasible or desirable.

As to the first and main issue between Dr. Mercier and ourselves, the cat is now out of the bag, and the end is at hand. Dr. Mercier says explicitly in his last letter that insanity is primarily a disorder, not of mind, but of conduct. We did not, as already said twice, object to the study of conduct, because we well knew that it must be studied, whether we consented or not. But we did object to the study of conduct as set up by Dr. Mercier—conduct which is but a second-hand, made-up bit of goods, arrogating to itself the position and privileges of old-established attributes such as reason, will, etc., and certainly not fit to be "classed" with them. Apparently *mens sana* will now be an obsolete expression.—I am, etc.,

Ticehurst, Feb. 24th. H. H. NEWINGTON.

STANDARDIZATION OF PANCREATINS.

SIR,—In view of the very great importance which on occasion attaches to the matter, I think the attention of medical practitioners, and more especially of medical officers in charge of hospitals, should be drawn to the variability that exists in the activity of the pancreatins and pancreatin preparations which are upon the market.

I had occasion recently to examine a number of specimens of pancreatin, pancreatin tablets, and peptonizing powders, and I found that a considerable proportion of them were practically inert. Since pancreatin may be obtained at prices varying from 5s. to 23s. a pound, and as the cheaper would most probably be the one supplied under contracts not restricted, it would seem very desirable to fix some standard to which pancreatin should conform. There is very little difference between the appearance of pancreatinized and non-pancreatinized milk; the test usually applied in England is that of the *United States Pharmacopoeia*, but this is not entirely satisfactory. I would therefore suggest that Sorensen's test should be used, and that 0.02 gram of pancreatin, when tested by this method after one hour's digestion, should form amino-acids equivalent to 2 c.cm. of N/5 soda.

Tablets combined with soda should have the addition of a little starch, and be granulated with spirit for compressing. When made in this way no deterioration of the pancreatin takes place.—I am, etc.,

F. F. SHELLEY, F.I.C.,
Chemist to the Society of Apothecaries.

Apothecaries' Hall, Blackfriars, E.C., Feb. 13th.

MOSQUITO DESTRUCTION.

SIR,—I have been interested both in Dr. Elkington's letter on the above subject which appeared in the JOURNAL of January 13th, and also in the experiments conducted by Sir Ronald Ross and Mr. Edie, and which have now been fully recorded in the *Annals of Tropical Medicine and Hygiene*, vol. v., No. 3 of December 30th, 1911.

Dr. Elkington was unable to obtain the same results as Sir Ronald Ross and his co-worker. I write to suggest that this may be due to the fact that, commercially, preparations of potassium cyanide vary greatly in strength. Some time ago I was trying to find a more humane method of killing the pariah dogs which haunted the outskirts of Khartoum than by poisoning them with strychnine. I tried potassium cyanide, and found it frequently almost inert. On reference to our research chemist, Dr. Beam, he informed me of the fact stated above. Indeed, a glance at Messrs. Baird and Tatlock's latest catalogue (1910) will show that the preparations in the market may vary from 40 per cent. to 100 per cent. in strength. I suggest that its failure in Dr. Elkington's hands may be due to the strength, or rather lack of strength, of the preparation he employed. It is evident that in ordering this larvicide it will be necessary to specify the amount of cyanide it must contain, and to be sure that a good sample is secured.

Another matter which may claim attention is concerned with the larvicide recommended by Le Prince, and mention in the paper by Ross and Edie. Dr. Beam prepared some of this larvicide for use in the Sudan, and in the course of his work discovered that Le Prince's original description of its preparation is incomplete. It is *solution* of caustic soda which should be added to the mixture of carbolic acid and resin. Ross and Edie found that the resin did not dissolve readily in the carbolic acid. It has, as Le Prince states, to be added after being well pulverized. Dr. Beam noted that the fine powder is best added by sprinkling it over the surface of the heated carbolic acid. He informs me that the proper preparation of the larvicide can only be reached by experiment. There may be several little points needing attention which require to be learnt by experience. Hence, a simpler form like the cyanide in soap tablets is very desirable, though of course its use is limited to certain types of water collections.—I am, etc.,

ANDREW BALFOUR, M.D.,
Director, Wellcome Tropical Research Laboratories.

Khartoum, Feb. 8th.

POST OFFICE MEDICAL OFFICERS: THEIR OPPORTUNITY FOR JUSTICE.

SIR,—In reply to "Ultimatum" (March 2nd), as a Post Office medical officer—and I feel I express the feeling of the majority of such officers—I congratulate him on his letter. We feel now is the time for unity, and, strong in our good cause, we should demand that the unjust and obnoxious claims put upon us without payment and without consent should be for ever removed.—I am, etc.,

PASTOR.

Public Health AND POOR LAW MEDICAL SERVICES.

PRESERVATIVES IN MILK AND CREAM.

NEW regulations under the Public Health (Regulations as to Food) Act, 1907, have been drafted by the Local Government Board with regard to the use of preservatives in milk and cream. The addition of any preservative substance whatever to milk intended for sale is totally prohibited. In respect of cream, the use of boric acid, borax, or a mixture of these, or of hydrogen peroxide in any amount not exceeding 0.1 per cent. by weight is permitted, provided that the cream to which it is added does not contain less than 40 per cent. by weight of milk fat. Should the proportion be under 40 per cent., the prohibition is total. Also forbidden is the addition of any thickening substance to cream or preserved cream. It is proposed that these regulations shall come into force on June 1st, and that on and after January 1st, 1913, consumers of cream shall be further safeguarded by preserved cream being mentioned in all documents, advertisements, and trade lists relating thereto, as either preserved cream (boracized) or preserved cream (peroxidized), as the case may be.

Obituary.

THOMAS PROUDFOOT, M.B., C.M., B.Sc., F.R.C.P.E., EDINBURGH.

EDINBURGH graduates of the late Seventies will be grieved to hear of the death of Thomas Proudfoot, which took place at his residence in Edinburgh on February 27th.

His career was interesting, and his personality no less striking. Born in Edinburgh in 1842, he was educated at the Royal High School, where he came under the influence of MacMillan, a noted teacher of the day. Though the boy's tastes were evidently literary, his father had "views," and, instead of yielding to the lad's desires, ordained that his son should learn a trade. He was in consequence apprenticed to a watchmaker. Accepting the inevitable, young Proudfoot determined to do that which he was forced to do, as well, if not better, than most of his fellows. On the termination of his apprenticeship he went to London to acquire that skill and dexterity in his work which could only be obtained from the specialists—English, French, and Swiss—who then had their head quarters in Clerkenwell. In this locality he gained that experience of life among the working classes on which he based so many of his subsequent opinions; there he became acquainted with the bitterness of life among the poor—a memory which ever after stirred his generous impulses; there he imbibed those socialistic views with which as a young man he was so strongly impressed. But, more than all, he learnt that even amongst these humble folk there were geniuses just as able and heroes quite as noble as those in the higher walks of life. With this experience of life in London he combined a knowledge of conditions abroad, for many of his holidays were spent mostly on foot in exploring France, Switzerland, and Italy.

It was towards the latter part of his career in London that he came under the influence of Darwin and Huxley. To him the great surgeons and physicians of the day were the embodiment of those particular virtues which seemed so essential to lighten the load of human misery. The desire to help in some way became a passion with him, and when, on the death of his father, he found himself the possessor of a modest fortune, Proudfoot felt that the opportunity of his life had arrived. The prospect of financial success in business, then within his reach, weighed as nought with him; all was sacrificed to the attainment of that ideal—that means to an end—which, as a practitioner of medicine, would enable him in some measure to assuage the sufferings of the bodily oppressed.

In 1875, at the age of 33, Proudfoot commenced the study of medicine in Edinburgh. By most of the men of that time he will be remembered as a tall and powerfully built man, with a massive head and a refined and intellectual face. Somewhat casual as to dress and appearance, he was possessed of a cherry optimism which was infectious. Whilst every one knew and liked "T. P.," as he was called, it was reserved to the few to realize what manner of man he was; to them alone were revealed the intensity and sincerity of his purpose. To him the task was a laborious one; its justification was the end in view. When, in 1880, his efforts were crowned with success and he took his degree, Proudfoot felt that he was now free to put in practice those principles which had been his guiding lights.

Appointed soon after his graduation to the charge of a colliery practice in the North of England, he experienced, for the first time, a rude shock to some of his ideals. At the beck and call of every one, he began to realize that gratefulness for his attentions was not a universal characteristic amongst his patients; rather was he met with grumblings and charges of inattention. Against all this he silently girded. Then came a severe epidemic of small-pox. The folk were panic-stricken and afraid; no nurses could be got; no assistance could be obtained. Himself he nursed the sick and dying; himself he carried the dead to the mortuary, and he alone was there to place them in their coffins. It seems strange to think that such things could happen. But he had his reward; for after telling the people in no measured terms what he thought of them, he became a hero in the district and his patients were his slaves.

Soon after, acquiring a practice at Newbiggin-by-the-Sea, he took up golf—not so much with the intention of providing for his own amusement, for he had little spare time on his hands, but rather with the idea of inducing the miners to spend their leisure in this healthful and innocent sport. The links, which he was instrumental in getting laid out, now form one of the attractions of Newbiggin as a holiday resort.

Here occurred the tragedy of his life. Just when things were going well with him he was deeply involved in the affairs of a friend to whose assistance he had gone. The constant worry and anxiety to which he was subjected, and the frequent journeys he had to make when otherwise he should have been resting, so weakened his powers of resistance that on one of these occasions he caught a chill, resulting in an illness which cost him the loss of one eye and threatened for some time to involve the sight of the other. This broke his spirit; for the second time in his life he had had success in his hands, but Fate willed it otherwise.

Realizing that he was no longer physically fit to undertake the arduous duties of so extensive a district, he returned to Edinburgh. Again he found solace in study. In 1889 he took the B.Sc. in Public Health, and in 1892 was elected a Fellow of the Royal College of Physicians of Edinburgh. For some years he acted as Deputy Medical Officer of Health for the Lothians, and was for nineteen years visiting physician to the infectious hospital at Slateford. He was also a Vice-President of the Edinburgh Division of the British Medical Association.

In private life in later years he was somewhat of a recluse. Books were his absorbing interest. Few men had such an intimate and critical acquaintance with English literature. To spend an hour with him was an education, for if he failed to lay his hand on a reference the chances were that he would quote the whole passage verbatim. To those who knew him intimately the interest of his career depended on the fact that here was a man who up to middle age had lived and worked amongst a class with which no doubt the doctor is brought into intimate relations, but not necessarily under conditions which may impress him with its virtues. Dr. Proudfoot knew the working man well, and his love was for the poor; it was in large measure from a desire in some way to alleviate the hardship of their lot that he was induced to enter the profession.

His subsequent experience was such as to lead him considerably to alter his views regarding some of his ideals. He found that despite the labour which he spent in their service he was often charged with neglect; he realized that whilst little consideration was shown him, everything was expected of him. He felt keenly, too, the limitation of his powers, and, always excepting surgery—for the craftsmanship of which he had an unbounded admiration—soon recognized that his ministrations in serious illness were confined to studying the comfort of his patient, and that medicine as a curative agent was of little avail. He had expected to do so much that he was sadly disappointed in being able to do so little. All this reacted on his mental attitude. The cheery optimism of his youth was replaced by a qualified pessimism. For the generous impulses of his early manhood, which found expression in his adoption of a socialistic attitude was substituted in later life the acceptance of pronounced Conservative opinions. It is the experience of many—in his case it was the lesson of his life.

He wrote little, but thought much. As the outcome of his experience he had grave doubts as to the efficacy of vaccination, but whilst holding strong views on this subject he bowed to the judgement of the majority. In other matters he was sometimes quite unorthodox. His opinions, if not always convincing, were listened to with respect, for it was recognized that they were the outcome of honest convictions.

He was a man with a big heart and the gentleness of a woman. No one ever appealed to him in distress without immediate relief. His small fortune was dissipated in rendering assistance to others, so much so that towards the end of his life his own circumstances were straitened. He was unmarried. As in life, so in death, he left what little remained to the cause of charity.

The funeral, which took place at Warriston Cemetery, was largely attended, among the members of the profession present were: Dr. Bramwell, President of the Royal College of Physicians; Mr. Berry, President of the Royal College

of Surgeons, Edinburgh; Professors Caird, Littlejohn, Hunter Stewart, Stockman (Glasgow), and Thomson (Oxford), and Drs. Dewar, Haultain, Ritchie, and Norman Walker, amongst others.

SIR FRANCIS CRUISE, M.D.,

PHYSICIAN IN ORDINARY TO H. M. THE KING IN IRELAND; CONSULTING PHYSICIAN, MATER MISERICORDIAE HOSPITAL, DUBLIN.

SIR FRANCIS CRUISE died on February 26th at his residence in Dublin. He had been ill for some time, but his condition only became serious about a week before his death.

He was born in Dublin in 1834; he entered Belvedere College at the age of 10, where he showed great ability and devoted himself ardently to his studies. In later years he was extremely proud of his election as first President of the Belvedere Union. He afterwards went to Clergowes Wood, and entered Trinity College, Dublin, in 1852. He graduated in Arts in 1856 and in Medicine in 1858. During his course in college he studied under such distinguished men as Professor Banks, Professor Smith and Professor Apjohn. He then studied at the Home of Industry Hospitals and at the Carmichael School of Medicine, where he took an active part in the scientific work of Dr. Robert M'Donnell. At the completion of his hospital studies, as he was run down in health owing to overwork and a severe attack of fever, he went to America with Count Henry Russell, and afterwards spent some time in study at various European schools of medicine.

All this helped to give him his broad outlook upon the world, and on his return he decided to practise in Dublin. Recognition of his ability, however, came slowly; in the first year he received £7 from private patients, in the second £11, in the third £30, and in the fourth £130; his practice then grew steadily year by year. During this time, however, he was not idle; he worked for many years as a teacher at the Carmichael School of Medicine, and in 1861 he took the M.D. degree in the University of Dublin. In the autumn of the same year, on the opening of the Mater Misericordiae Hospital, he was appointed Junior Physician. He was a constant writer on medical subjects, and was the pioneer of the introduction of the endoscope in Dublin, as he is said to have invented the first instrument of the kind which was used in that city. Sir Francis Cruise filled for many years the office of Senator of the University of Dublin and of the Royal University of Ireland from its foundation to its extinction. He was appointed to various responsible offices, including that of Consulting Visitor in Lunacy under the High Court of Chancery. He was President of the Royal College of Physicians in Ireland from 1884 to 1886. In 1896 he received the honour of knighthood. In 1901 the late King Edward appointed him Honorary Physician in Ordinary in Ireland, and in 1905 Pope Pius X honoured him with the decoration of Knight of St. Gregory the Great in recognition of his writings upon *The Imitation*. In 1906 Sir Francis declined the honour of a baronetcy.

Besides devoting a large part of his spare time to literature, he was known in Dublin as an ardent lover of music, and he was himself an accomplished player of the violoncello. He was President of the Instrumental Club, a Governor of the Royal Irish Academy of Music, and has edited many classical works and Irish airs. He married in 1859; the union lasted for more than fifty years, and its golden jubilee was observed a year before the death of Lady Cruise.

THE LATE PROFESSOR YOUNG.—The Anatomical Society was represented at the funeral of Emeritus Professor Young by Professor Elliot Smith, a vice-president, the president, Professor R. W. Reid of Aberdeen, being unavoidably prevented from attending.

WE regret to announce the death of Dr. JULIUS PAGEL, Professor of the History of Medicine in the University of Berlin, at the age of 60. He was born at Pollnow, and studied medicine at Berlin, where he graduated in 1876. He began lecturing on medical history in 1891, and was given the title of Professor in 1898. He was the author of an introduction to the history of medicine in the nineteenth century, of a biographical lexicon of the medical practitioners of the nineteenth century, of a work on Deontology (medical ethics). He also edited the works of Henri de Mondeville, and wrote many papers dealing with subjects related to medical history. He was co-editor with Professor Neubürger of a large work on the history of medicine.

Universities and Colleges.

UNIVERSITY OF OXFORD.

DR. JAMES A. GUNN, F.R.S.E., has been appointed to the Readership in Pharmacology. He will have charge of the teaching of materia medica, and will superintend the construction of a new pharmacological laboratory. Dr. Gunn has for several years acted as Assistant to Sir Thomas R. Fraser in the materia medica department of the University of Edinburgh.

UNIVERSITY OF CAMBRIDGE.

Degrees.

THE following degrees have been conferred:

M.B.—A. J. S. Fuller, W. B. Marshall.
B.C.—A. J. S. Fuller.

UNIVERSITY OF BRISTOL.

AT a meeting of council held on Friday last Mr. Ernest W. Hey Groves, F.R.C.S., was appointed Lecturer in Surgery to dental students.

The thanks of council were given to the Bristol Royal Hospital for Sick Children and Women and the Victoria University of Manchester for gifts of valuable specimens to the pathological museum.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examinations indicated:

D.P.H. (*Both Parts*).—C. Averill, A. D. Clinch, P. D. Bhiwandiwalla, F. Muller-Fonseca, *E. E. Goodbody, E. Morton, J. Robinson, P. J. Taaffe, E. C. Thomas.

* Obtained honours.

Medical News.

THE KING has been pleased to approve the appointment of the following gentlemen to the consulting staff of the Convalescent Home for Officers of H. M. Navy and Army, Osborne, Isle of Wight, as from November 23rd, 1911: Sir Anthony Bowlby, C.M.G., F.R.C.S.; Surgeon-General Sir Arthur M. Branfoot, K.C.I.E., M.B., F.R.C.S., I.M.S.; Sir James Kingston Fowler, K.C.V.O., M.A., M.D., F.R.C.P.; Mr. George H. Makins, C.B., F.R.C.S.; Dr. H. D. Rolleston; Mr. Charters J. Symonds, M.S., F.R.C.S.; and Dr. James Taylor, M.A., F.R.C.P.

DR. STCLAIR THOMSON has been unanimously elected a Corresponding Member of the Vienna Laryngological Society.

MR. HERBERT HAYNES TWINING has been elected Treasurer of the King's College Hospital in succession to Mr. Charles Awdry.

MR. J. ASTLEY BLOXAM, F.R.C.S., and Dr. William E. Cant have been appointed Knights of Grace of the Order of the Hospital of St. John of Jerusalem in England.

THE Hunterian Society's silver medal awarded annually for the best original essay submitted by a general practitioner has been won by Dr. Arthur Goulston, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., of Heavitree, Exeter, for his essay on "The Use of Sugar in Heart Disorders."

THE annual dinner of the Chelsea Clinical Society, at which Professor Einthoven will be present, will take place at the Richelieu Hotel, Oxford Street, on Wednesday, March 20th, at 7.45 for 8 p.m. punctually. Tickets, price 7s. 6d., may be obtained from the senior secretary, Dr. Halls Dally, 16, Lower Seymour Street, Portman Square, W.

DR. COLLIER, J.P., Lincoln, on retiring from practice, was presented, as a token of their esteem by many of his patients and friends with a handsome suit and dressing-case. The members of the Lincoln Women's Liberal Association and other friends also gave Mrs. Collier a very beautiful morocco case filled with toilet requisites, "on her resigning her position as local president, after nineteen years of strenuous and invaluable service in the cause of religion, education, and social reform."

THE International Anti-Epilepsy League will hold its annual meeting this year at Zurich on September 6th and 7th, at the same time as the International Congress of Psychology and Psychotherapy, and the meeting of the

Society of Swiss Psychiatrists and Neurologists. The presidents of the business meetings are Professors Tamburini of Rome, and von Monakoff of Zurich; those of the scientific meetings are Professors Forel of Yvonne, and Donath of Budapest. Among the subjects proposed for discussion are the following: A diet poor in salt; and alcoholic epilepsy.

AT the last election to the French Senate sixteen members of the profession were successful. The following is the list of medical senators: Drs. Blanc, Hautes-Alpes; Bollet, Ain; Borne, Doubs; Cannac, Aveyron; Chauveau, Cote d'Or; Combes, Charente-Inférieure; Dellestable, Corrèze; Denoix, Dordogne; Flaissière, Bouches du Rhône; Gacon, Allier; Gauthier, Aude; Peschaud, Cantal; Peyrot, Dordogne; Rouby, Corrèze; and Vagnat, Hautes-Alpes.

DR. WILLIAM NICOLL will begin a course of seven lectures at the Lister Institute, Chelsea Gardens, on modern aspects of helminthology, on Tuesday, March 19th. The second lecture will be given on March 22nd, and the following lectures on Tuesdays and Fridays (with the exception of Easter week) ending on Tuesday, April 16th. The course is open without fee to medical men, and the lectures, which will be given at 5 p.m. on each day, will deal with the general outlines of helminthology, and with the chief special problems relating to the parasitic worms of man; they will be illustrated by lantern slides.

DR. CHARLES S. BRADDOCK, late Chief Medical Inspector, Royal Siamese Government, has recently stated, according to the *Medical Record*, that the official report for the city of Bankok, Siam, covering the time from October 14th to December 9th, 1911, shows that for the first week of this period there were 14 deaths from small-pox, and that by the last week the number had risen to 74. In a single village of Siam he has seen as many as fifteen or twenty children totally blind from the result of this disease. In the epidemic of 1902 in the north of Siam as many as 75 per cent. of all unvaccinated children under the age of 5 years died from the disease. The adults were immune because they were the survivors of a previous epidemic, and had had the disease. At the present time the Government of Siam is endeavouring to vaccinate all the people, the King and Queen having set the example by being vaccinated. In the village of Tatchin an epidemic broke out some time ago, and before the officials of the Government were notified there were 100 deaths from the disease. The entire population of the village was vaccinated, and since that time there has been practically no small-pox there.

PROFESSOR CLAUS SCHILLING in a recent article (*Berl. klin. Woch.*, No. 1, 1912) discusses briefly the suggestions made with the object of combating sleeping sickness, and advocates certain measures for adoption in Germany's new colonial acquisition in the Cameroons. After dealing with the geographical distribution of the disease and of the *Glossina palpalis*, etc., in the areas under discussion, he discusses the possibility of stamping out the disease by sterilizing the blood of man affected with the disease by medicinal measures, but admits that apart from the impossibility of detecting every case of the disease in any given area no suitable drug has been discovered. He examines the statistics of the English Sleeping Sickness Commission, which shows that 94 per cent. of all the patients died in spite of all means of treatment, and also those published by Ullrich giving a somewhat better result of atoxyl and arsacetin treatment in the first stage of disease. The English method of depopulating affected areas might have even tended to diminish the frequency of the disease in Uganda, but the recently published experiments of Sir David Bruce suggested that antelopes, and even oxen, sheep, and dogs might serve as reservoirs for trypanosomes. Attempts had been made to turn out the tsetse fly itself by destroying the trees on the borders of rivers and lakes, where the tsetse fly prefers to live. Koch showed that if the fly were robbed of moisture and shade it soon disappeared. Attention must, of course, first be given to the caravan routes. A further suggestion made was that the glands of each individual passing into the colony should be examined by a medical officer attached to the Customs house, and that when suspicion was aroused the contents of the glands or the blood should be examined. Finally he calls attention to the figures of the incidence of the disease in Uganda, and of the actual number of deaths. The number of admissions into the Uganda sleeping sickness hospital was 1,185 in 1906–7, 3,896 in 1907–8, 1,538 in 1908–9, and 590 in 1909–10, while the deaths each year since 1905 were 8,003, 6,522, 4,170, 3,662, 1,782, 1,546, respectively. He suggests that the disease frequency is undergoing a diminution, or, in other words, that the rise in the disease is now being followed by a fall.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

INQUIRER asks if assistants in Irish pauper lunatic asylums have more prospects of being allowed to marry afforded them than those similarly situated in English asylums.

W. A. H. desires to hear of a good English medical work of the style of Osler's *Practical Medicine*, which has been translated into Russian.

URTICARIA asks for advice as to treatment of a most persistent and intense irritation of the skin, with urticaria, in an old man suffering from rheumatism and rheumatoid arthritis.

J. H. W. asks for experience as to the value of *x* rays as a prophylactic after amputation of the mamma for carcinoma, and whether any danger might accrue from the rays themselves.

COUNTRY BIRD asks if there is any danger in drinking water stored in a cistern the inside of which has been painted with red lead paint.

X. would be glad to hear of an address where his wife could obtain rational clothing for use during pregnancy. The so-called "maternity skirt," with its elastic waistband seems very unsuitable. Skirts supported from the shoulder are apparently the only solution.

CAPTAIN D. G. CARMICHAEL, R.A.M.C., writes to ask for information as to the origin of the following surgical expressions. He says: Surgically—(1) Genu varum = "bow-leg"; (2) Genu valgum = "knock-knee." But, according to Dr. Smith's smaller Latin-English Dictionary, 1912, p. 634, the adjective varus-a-um = "having the legs turned inwards—knock-kneed"; and on p. 633, valgus-a-um = "having the legs bent outwards—bow-legged." Thus the Latin words have the exact opposite meaning to their "surgical Latin equivalents"; in other words, genu valgum ought to mean "bow-legged" and not "knock-kneed," and genu varum ought to mean "knock-kneed" and not "bow-legged."

FREQUENT MICTURITION.

N. asks for suggestion as to treatment of a business man, aged 28, who has suffered since infancy from frequent micturition, varying from ten to twenty times in twenty-four hours, usually two to three times at night. There is no nocturnal incontinence, and the urine is normal. Hypnotism has been tried without effect, and also the usual drugs.

GRANULAR PHARYNGITIS.

J. M. would be glad of hints as to the treatment of chronic granular pharyngitis of six months' duration in a motor cyclist who has to be out in all weathers. Iodine and other paints, along with the usual general treatment, have been tried. The patient is an abstainer, and has given up smoking entirely.

HOMES FOR INFIRM LADIES.

T. L. desires to hear of a home where an old lady suffering from incontinence of urine, not bedridden or imbecile, could be taken at a small charge.

P. L. B. asks for a home which would take an elderly lady who has only £4 or £5 a year in addition to the old age pension.

SABRINA wishes to hear of any institution, preferably in the midland counties, where an elderly woman who has gone blind from glaucoma could be admitted at a small charge.

ANSWERS.

C. G.—Instruction is given in the use of the ophthalmoscope at most of the ophthalmic hospitals in London, and these courses usually commence in October, January, and May. In these classes ophthalmoscope cases are shown. For one who simply required practice in all forms of eye disease the best

plan would be to apply to become a clinical assistant to a member of the staff of one of the hospitals when facilities are given for the examination of cases. Particulars of the classes may be obtained by application to the secretary of such institutions as the Royal London Ophthalmic Hospital, City Road, E.C., or the Royal Westminster Ophthalmic Hospital, King William Street, Strand, W.C.

SECOND-HAND HORSE AMBULANCES.

IT may interest other members besides the correspondent who made the inquiry to know that the Metropolitan Asylums Board has a number of ambulances, no longer required owing to the introduction of motor traction, to dispose of.

KELOID AFTER APPENDICECTOMY.

MR. J. S. KELLETT SMITH, F.R.C.S (London, W.), recommends "M. V. O. M." to try ionic medication with sodium chloride solution of not less than 2 per cent. strength. Even better results, he says, may be obtained by soaking the negative electrode in sea water.

PUTTING SALT ON A DEAD BODY.

DR. CECIL WORSTER-DROUGHT, B.A., M.R.C.S., etc. (Romford), writes: With regard to "A. Z.'s" query concerning the custom of placing salt on a corpse (BRITISH MEDICAL JOURNAL, January 27th, p. 224), may I quote the following from J. C. Wall's *Devils?* "The devil," Moresinus says, "abhors salt for the very sufficient reason that it is the emblem of eternity and immortality." The salt is placed on the dead body with the idea of keeping off the devil and his evil spirits.

SUPERSTITIONS REGARDING MENSTRUATION.

S. D. C. writes: The superstitions "G. W. K. C." refers to are clearly traceable to the ancient doctrine of "cleanliness" in women as laid down by the Jewish legislature and adopted by the Arabian physicians. See Hooper's *Medical Dictionary*, 1825. See also Ezekiah and Isaiah.

PATHOLOGICAL SPECIMENS.

T. H. L.—In London actual specimens from human beings, as distinct from models, of pathological conditions of the ear, nose, and throat, are obtained by vigilance, diligent research, and patient labour in the *post-mortem* rooms. Specimens obtained in this way generally have a carefully recorded clinical history, and are therefore the more valuable for teaching purposes. They usually are placed in the museums of the medical schools.

MORTALITY OF NEPHROPEXY.

T. L.—The mortality of nephropexy in the hands of surgeons whose asepsis is unimpeachable should not be more than 1 per cent., or at most 1.5 per cent. Edebohls has collected statistics of 836 operations performed by surgeons whose experience was of not less than 15 operations each; the mortality was 1.65 per cent. Edebohls himself reports 193 operations with 3 deaths; more than 60 of these patients had bilateral operations, and in a fourth of them the appendix also was removed. Goelet records 171 operations on 134 patients without a death (Morris, Jacobson, and Rowlands). If the kidney is healthy and the surgeon doubtful as to the propriety of operation, it may be wiser for him to satisfy himself that other treatment, including trial of a well-fitting apparatus, has failed. By other treatment is meant dealing with constipation, dyspepsia, tight corsets, general nervous symptoms. Further, the surgeon must make certain that the mobility of the kidney is not simply an accompaniment of general ptosis and abdominal flaccidity, in which case nephropexy will probably fail. But if there are frequent severe attacks of pain or continuous pain, frequent occurrence of "Dietl's crises" due to kinking or torsion of renal vessels or ureter, hydronephrosis following upon chronic bending of the ureter, extreme degree of mobility preventing the patient going about her usual duties, then operation is called for. It must not be forgotten that many quite healthy women have movable kidneys, generally the right, and they have no symptoms at all, the mobility of the kidney being discovered accidentally.

LETTERS, NOTES, ETC.

IGNITION PLUGS: A WARNING.

DR. C. BUTLER SIMPSON (Filey) informs us that he recently purchased from a person giving the name of A. E. White, some "optima ignition plugs." Being dissatisfied with the plugs, he wrote to the address given, but his letter was returned, marked "Not known." This note and previous communications with regard to ignition plugs suggest that medical men would perhaps be better advised if they purchased these plugs from firms known to them rather than from travelling agents.

ANAESTHESIA FOR SUBMUCOUS RESECTION OF THE SEPTUM.

DR. STUART V. STOCK (Senior Honorary Assistant Anaesthetist, Royal Infirmary, Bristol) writes: I have read with interest Mr. B. Seymour Jones's paper in the JOURNAL of February 24th, and should like to suggest that injecting adrenalin into a patient under the influence of chloroform is unjustifiable. Mr. Jones tells us of the unfavourable symptoms he has noticed, and of his three patients who narrowly escaped death. I can endorse what he says about the evil effects of adrenalin from personal experience, and would suggest that he uses ether and atropine to anaesthetize his patients with, packing the nose with gauze wrung out in a mixture of equal parts, 10 per cent. cocaine and 1 in 3,000 adrenalin.

SMALL-POX INOCULATION.

MR. JAMES M. MCGHEE (St. Helens) writes: With reference to your comments in the JOURNAL of January 27th, p. 210, on my offer with regard to the inoculation of small-pox, contained in the January issue of the *Vaccination Inquirer*, kindly allow me to state, in justice to the editor, that I alone, and not he, was responsible for the heading, "The only effective way of meeting the scaremongers." He, I believe, does not share my view as to the non-transmissibility of small-pox by inoculation. He also is of the opinion that the inoculated in prevaccination times were prolific factors in the prevalence of the disease, whereas I believe they exerted no influence whatever. On these aspects of the vaccination question we agree to differ.

HEALTH OF GRAND CANARY.

DR. W. M. M. JACKSON (Las Palmas) writes: Early in the season it was reported in the press that some form of infectious disease was prevalent in this island. May I take the opportunity through your columns of stating that there was no foundation for any such report, and that the season has been and is particularly a healthy one? Visitors and invalids can enjoy the advantages of this beautiful climate under as healthy conditions as can be obtained anywhere.

"A GOOD THING FOR SATURDAY."

G. C. S. writes: It may prevent some members making a bogus appointment if they know of the following incident that happened to me and others. Last week a Mr. Dunne called on me whilst I was out. He stated that he would call again, and did so. I found a well-set-up, clean shaven, pale-faced man, in a Newmarket greatcoat, about 5 ft. 11 in., who stated that his father was Captain ——, who lived at an address in West Kensington. He further told me that they had an invaluable servant, a jockey, who suffered from haemorrhage from the rectum. His father's wish, he told me, was that this lad should be "patched up," if possible, till the end of the steeplechasing in the middle of March. He made an appointment for two days hence, and said he would personally attend with the jockey. As West Kensington is somewhat beyond my normal limits of practice, I ventured to ask why I had the honour of being selected to advise this valuable jockey. The reply was that a mutual friend had suggested my name. I did not pursue this line further. Before leaving, my visitor in the Newmarket greatcoat asked me if I was interested in racing. Having assured him that I was not, he regretfully told me that he had "a good thing for Saturday." I advised him (without fee) that if he was in possession of such a "good thing" it would be well to keep it in the family. The appointment was not kept. Having my suspicions as to the bona fides of this prospective consultation, I mentioned the matter to a medical neighbour, who told me, with much merriment, that he had gone through the same ordeal with a similar result.

THE ETIOLOGY OF CANCER.

MR. KENNETH CAMPBELL (London, W.) writes: The recent discussion on this subject reminds one of the logical fallacy ridiculed by Molière. The father of a dumb girl wants to know why his daughter is dumb. "Nothing is more easy to explain," says the physician Ignarelle; "it comes from her having lost the power of speech." "Yes, yes," objects the father, "but the cause, if you please, why she has lost the power of speech." Ignarelle is quite ready with an answer: "All our best authors will tell you that it is the impeding of the action of the tongue." We all know that the cancer cell acts as a parasite, but will any one please tell us why it does so?

INJURY OF THE EYEBALL OR DISEASE.

MR. A. A. BRADBURNE, F.R.C.S.Edin. (Manchester), writes: Major McPherson's paper on this subject (SUPPLEMENT, March 2nd, p. 286) reminded me of a case I saw some years ago. The patient was a young man who for two years had suffered from defective central vision of the left eye, which he attributed to a blow from a football. Recently the right eye had become similarly affected, and he was anxious to know if the same "injury" had caused this further complication. After a thorough examination I advised a visit to a nerve specialist, where my suspicions that it was in reality a case of disseminated sclerosis were confirmed. Had it been a case under the Workmen's Compensation Act complications might have arisen.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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